Invitation for Comments on the "Short List" Candidates for the Advisory Panel on the EPA's Report on the Environment
EPA Science Advisory Board (SAB)
October 22, 2003

The EPA Science Advisory Board (SAB) announced in its June 17, 2003 Federal Register Notice (Volume 68, Number 116; Pages 35883-35884), that it was forming the Panel for a SAB Advisory on the Agency's Report on the Environment and requested nominations for potential panel members. Background on the project and details on panel nomination process appear in the above referenced Federal Register notice and are also available at the SAB website (www.epa.gov/sab).

The Science Advisory Board Staff Office has reviewed the 74 nominations for the Panel, and has identified a list of nominees for a "Short List" of 55 candidates based on the qualifications and interest of the nominees. Brief biosketches of the candidates on the "Short List" are listed below for comment. We invite comments from the public on these candidates. We welcome information, analysis or documentation that the Board should consider in evaluating the "Short List" remaining candidates.

The SAB Staff Office Director, in consultation with SAB leadership, as appropriate makes the final decision about who will serve on the panel in the "Panel Selection" phase. In that phase, SAB Staff completes its review of information regarding conflict of interest, possible appearance of lack of impartiality, and appropriate balance and breadth needed to address the charge. They review all the information provided by the candidates, along with any information that the public may provide in response to the posting of information about the prospective panel on the SAB website during the "Short List Phase," and information gathered by SAB Staff independently on the background of each candidate.

Please provide any advice, observations or comments you might think would be helpful in selecting the final candidates, no later than November 12, 2003. Please make your comments to the attention of Dr. James Rowe, Designated Federal Officer. E-mailing comments (rowe.james@epa.gov) is the preferred mode of receipt. We intend to make final selections by December 1, 2003.

BioSketch

Advisory Panel on EPA's Report on the Environment

William Adams

Dr. William Adams serves on SAB's Environmental Processes and Effects Committee (EPEC) and Research Strategy and Advisory Committee (RSAC). Dr. Adams is Director of Environmental Science for Kennecott Utah Copper in Salt Lake City, Utah. He first began working for the SAB in 1987 as a consultant to EPEC on the first review of the proposed sediment equilibrium partitioning guidelines for deriving sediment quality criteria. His publications in the early 1980's lead to the development of this approach for assessing sediment contaminants. Since this first review, he has participated in all of the sediment methodology reviews including the most recent review on the methodology for metals. Recently Bill played a key role in assisting the SAB develop an Integrated Risk Policy (IRP) approach for assessing and ranking the relative risk of various environmental stressors. Dr. Adams received his bachelor's of science degree in biological sciences from Lake Superior State University, Sault Ste. Marie, Michigan, and his master's and Ph.D. degrees from Michigan State University, in wildlife and aquatic toxicology, respectively. Bill worked for Monsanto Chemical Company for 14 years where he was a Science Fellow and his work focused on aquatic toxicology, environmental fate and microbial degradation of organic chemicals including considerable work with dioxins. He also spent five years working for ABC Laboratories as Director of Environmental Toxicology before coming to Kennecott Copper in 1995. Dr. Adams most recent research interests have been in the areas of metal toxicity, particularly the biogeochemical cycling and toxicity of selenium in wetlands. He is currently working on a methodology for deriving site-specific water quality criteria for selenium and for the Great Salt Lake in particular. Other areas of interest include research efforts to evaluate the sensitivity or threatened and endangered fish relative to standard test organisms and the role of dietary uptake of metals in aquatic organisms as opposed to uptake via the water.Dr. Adams also serves as the chair of the International Copper Association's Environmental Committee. In this role he helps direct a $3M/yr environmental research program aimed at understanding both the essential nature and potential for toxicity associated with copper in the environment. Research is currently focused on copper in sediments, including net flux rates and potential for toxicity, bioavailability on soils, and runoff due to use in construction materials. Additionally, Dr. Adams works both on national and international regulatory issues including current science issues associated with harmonization of metal hazard classification within OECD and the worldwide development of persistence, bioaccumulation, and toxicity (PBT) guidelines.

Joseph Arvai

Dr. Arvai currently serves on the faculty of the School of Natural Resources at the Ohio State University. He received a B.Sc. in Biology and an M.Sc in Marine Ecology/Oceanography from the University of British Columbia (Vancouver, B.C., Canada) in 1994 and 1997, respectively. During this time period, Arvai's background in biology and ecology was developed through coursework (in biology, ecology, forestry, resource management, oceanography, and forestry) and field experience. In this latter category his research ranged from studies of the ecological effects of copper mine tailings on the biota of Howe Sound, experiments conducted in cooperation with the Canadian Space Agency and NASA to determine the drivers for vertical migration in shallow-system copepods, and a post-effluent abatement monitoring study of the ecology on the tidal flats of the Fraser River Estuary. This latter study was carried out in an attempt to determine the ecological changes that had taken take place in the Fraser Estuary following the cessation of the direct deposition of primary treated sewage effluent (from a nearby treatment facility). In addition to routine ecological measurements of parameters such as species diversity and density, the population dynamics and productivity of two robust indicator invertebrates, the amphipod Corophium salmonis and bivalve Macoma balthica, were monitored for a period of nearly three years. The monitoring of these species, which took place between 1994 and 1996, involved assessing their in situ density, biomass, and secondary production at four sampling stations on Sturgeon and Roberts Bank in the Fraser River Estuary, British Columbia. Related ecological parameters were also measured (e.g., benthic species composition, diversity, and biomass; organic loads). The main findings of this research were published in Marine Pollution Bulletin in 2002.At the completion of this project, Arvai began research towards a PhD in decision sciences in the broader context of natural resource management (graduate advisors were Timothy McDaniels, Robin Gregory, and Paul Slovic). This research involved studies of choice and preference behavior, along with tests of prescriptive, structured decision making approaches for making multiattribute, values-based choices and for fostering more thoughtful tradeoffs in resource management. Much of this early research took place in the context of stakeholder-based decision making for water use planning and ecological rehabilitation in the province of British Columbia. In particular, several studies of structured, multi-stakeholder decision making workshops were conducted to test the hypotheses that structured, values-based decision making approaches would lead to more thoughtful, better informed, and hence 'higher quality' management decisions by helping decision makers analyze a wider array of decision-relevant issues and to address key value tradeoffs. Publications stemming from this research appear in journals such as Environmental Management, Risk Analysis, and Research in Social Problems and Public Policy. After completing his PhD, Arvai worked as a post-doctoral researcher for the

Decision Science Research Institute (i.e., Decision Research) in Eugene, OR on topics related to expert risk judgments and further studies of structured decision making approaches. One of these projects tested values-based decision making approached for informing stakeholders' judgments about cleanup of federally listed contaminated sites (a recent publication in Environmental Science & Technology discusses this work). During this time, Arvai also served as an assistant to Dr. Robin Gregory on a SAB panel charged with offering recommendations for improving ecological health in the Tampa Bay Estuary. At the end of 2001, Arvai left Decision Research to join the faculty of the School of Natural Resources at the Ohio State University (his current position). Currently, Arvai's research has been expanded to focus on developing improved decision making approaches for risk problems involving intertemporal tradeoffs (i.e., management effort expended now in return for potential benefits later). He is also a member of the Society for Risk Analysis, Society for Judgment and Decision Making, and Sigma Xi. Arvai is participating in research funded by a current EPA/NSF award (DMVER Grant No. 9975345 to Decision Research) that investigates contextual influences on intertemporal choices. Other research avenues being explored by Arvai include studies of affect and the affect heuristic and involving underrepresented stakeholders in decisions about the environment in developing areas and countries (funded by the NOAA/Ohio Sea Grant and the Ohio State University Environmental Policy Initiative). Beyond his research activities, Arvai continues to incorporate concepts from previous and ongoing research efforts in the Risk, Communication, and Decision Making curriculum within the School of natural Resources at the Ohio State University.

Mark Bain

Mark Bain is the Director of the Center for the Environment at Cornell University. He received his doctorate from the University of Massachusetts, Amherst, MA. He is a quantitative aquatic biologist and ecosystem scientist that conducts both basic research and studies driven by current management issues. His taxonomic specializations are fish and benthic invertebrates with major system expertise concentrated on lakes, streams and estuaries. Statistics, modeling, and biological assessment are heavily used in most research and teaching. Environmental policy experience includes endangered species protection, energy - environment conflicts, watershed management, and international conservation. His current research examines (i) structure and development of bay and lagoon ecosystems around Lake Ontario, (ii) behavior and ecology of sturgeon, (iii) watershed scale environmental planning, (iv) methods for assessing biotic status of aquatic and wetland habitats, and (v) impacts to the Hudson River caused by the World Trade Center destruction.2003 – present Center for the Environment, Cornell University, Ithaca, NY. Director and Assoc. Prof., Natural Resources, Cornell University1991 - 2003 New York Cooperative Fish & Wildlife Research Unit, Cornell Univ., Ithaca, NY - Assistant Leader and Associate Professor, Department of Natural Resources, Cornell U.1998 Massachusetts Cooperative Fish & Wildlife Research Unit, U. Massachusetts, Amherst, MA - Unit Leader1986 to 1991 Alabama Cooperative Fish & Wildlife Research Unit, Auburn Univ., Auburn, AL Assistant Leader, Assistant and Associate Professor, Department of Fisheries and Allied Aquacultures, Department of Zoology and Wildlife Sciences, Auburn University1985 to 1986 Energy & Environmental Systems Div., Argonne National Laboratory (US DOE/Univ. Chicago), Argonne, Illinois - Ecologist/Statistician Teaching: Complex Systems (Cornell), Stream and Habitat Ecology (Auburn U, Cornell, Univ. Agric. Sciences-Austria), Impact Assessment (Auburn U, American Fisheries Society), Fish Biology (Cornell). Scientific Publishing: American Fisheries Society, Czech Academy of Sciences, Springer-Verlag, CEMAGREF France. Impact Assessment: National Park Service, Hydro Québec, President's Council on Environmental Quality, U. S. Environmental Protection Agency, Army Corps of Engineers, Canadian Federal Environmental Assessment Review Office, U. S. Fish and Wildlife Service, Xinjiang Uygur Autonomous Region China, Norwegian Water Resources and Energy Administration, Statkraft-Groner (Oslo), The World Bank. Professional Affiliations: American Fisheries Society, Ecological Society of America, American Association for the Advancement of Science, Trustee - Central & Western New York Chapter of The Nature Conservancy. Research Programs: National Science Foundation, The Nature Conservancy, Hudson River Foundation, USDI Grand Canyon Research and Monitoring Center, NOAA/NYDEC Hudson River National Estuarine Research Reserve, International Joint Commission, NJ Sea Grant, European Commission. Management Programs: U. S. Fish and Wildlife Service, National Marine Fisheries Service, NY Departmental of Environmental Conservation, International Joint Commission, US EPA-NY-NJ New York Harbor Estuary Program, Ukraine Ministries for Fisheries and Environmental Protection, U. S. Geological Survey.

Steven Benson

Dr. Steven A. Benson is a Senior Research Manager/Advisor at the Energy & Environmental Research Center (EERC) of the University of North Dakota. He received his Ph.D. in Fuel Science from the Pennsylvania State University in 1987 and his B.S. in Chemistry from Moorhead State University in 1977. Dr. Benson is responsible for leading a group of over 20 highly specialized scientists and engineers whose aim is to conduct research, development, and demonstration programs on power plant performance, environmental control systems, fate of pollutants, computer modeling, and health issues. Current research activities include computer modeling of combustion and environmental control systems, performance of selective catalytic reduction technologies for NOx control, carbon-based NOx reduction technologies, mercury measurement, mercury control technologies, particulate matter analysis and source apportionment, fate of mercury in the environment, toxicology of particulate matter, and in vivo studies of mercury/selenium interactions. The computer-based modeling efforts utilize various

kinetic, thermodynamic, artificial neural networks, statistical, computation fluid dynamics, and atmospheric dispersion models. These models are used in combination with models developed at the EERC to predict impacts of fuel properties and system operating conditions on system efficiency and emission. Dr. Benson is Program Area Manager for Modeling and Database Development for the EPA Center for Air Toxic Metals. Prior to his current position, Dr. Benson held the positions of Associate Director for Research and Senior Research Manager of the Fuels and Materials Science Group at the EERC, as well as Research Supervisor and Research Chemist for the U.S. Department of Energy Grand Forks Energy Technology Center. Dr. Benson has performed research on inorganic transformations and ash behavior during combustion and gasification for the past twenty-five years. Dr. Benson's principal areas of interest and expertise include management of complex multidisciplinary programs focused on solving energy production and environmental problems. Program areas include the development of 1) methodologies to minimize the effects of inorganic components on the performance of combustion/gasification and air pollution control systems; 2) the fate and behavior of air toxic substances in combustion and gasification systems; 3) advanced analytical techniques to determine the chemical and physical transformations of inorganic species in combustion gases; 4) computer-based codes to predict the effects of coal quality on system performance; 5) advanced materials for coal-based power systems; and 6) training programs designed to improve the global quality of life through energy and environmental research activities. Dr. Benson is a member of several professional organizations, including the American Chemical Society (ACS): 1) Fuel Division - Participates on the executive committee involved in the coordination and direction of division activities including outreach, programming, finances, and publications; 2) Councilor, Fuel Division - Represents the Fuel Division at the National ACS Council meeting; Chair Elect, Fuel Division - August 2002 - Elected to be Chair of the Fuel Division; Member, Committee on Environmental Improvement - The committee provides advice and direction to the ACS governance on policies and programs related to the environment. Since becoming a member of the committee, we have developed policy statements on Global Climate Change, Reformulated Gasoline and MtBE, and Energy Policy. We are currently working on statements on Multipollutant Control and the Precautionary Principle. These policy statements are used to assist legislators in developing national environmental policy. Members of CEI also provide testimony on a variety of environmental issues; the American Society for Mechanical Engineers (ASME): Advisory Member, ASME Committee on Corrosion and Deposition Resulting from Impurities in Gas Streams; Mercury Reduction Initiative - Minnesota Pollution Control Agency (MPCA): Participated in meetings for the mercury reduction initiative and provided advice regarding mercury control technologies for electric utilities and MPCA for voluntary mercury reduction strategies. Dr. Benson has authored or coauthored over 190 publications. He is the editor of two books, Inorganic Transformations and Ash Deposition During Combustion and Gulf Coast Lignite Geology, and four Special Issues of Fuel Processing Technology, and has served as a Technical Coordinator for numerous international conferences. Current sources of contracts include the U.S. Department of Energy; numerous commercial entities and coal-fired power utilities, including Otter Tail Power Company, Haldor Topsoe Inc. Cormetech, EPRI, Hitachi America Ltd., Ameren UE, Ontario Power Generation, Kinectrics, Dynegy Midwest Generation, Luscar Ltd., Minnkota Power Cooperative, Basin Electric Power Cooperative, BNI Coal Ltd., the North Dakota Industrial Commission's Lignite Energy Council, Great River Energy, and others; and the U.S. Environmental Protection Agency, where Dr. Benson currently is the Program Area Manager for Modeling and Database Development for the EPA Center for Air Toxic Metals at the EERC.

Richard Boone

Richard Boone is an Associate Professor of Ecosystem Ecology in the Institute of Arctic Biology, and the Department of Biology and Wildlife, University of Alaska Fairbanks. He received early training in ecology as a student and later a research assistant at The Ecosystems Center, Marine Biological Laboratory, Woods Hole, Massachusetts. He received his A.B. in Biology from Oberlin College, his M.S. in Forest Ecology from Oregon State University, and his Ph.D. in Forest Soils from the University of Massachusetts, Amherst. His research interests are in nitrogen cycling in forest soils, soil respiration, and soil organic matter dynamics. Current research addresses the relative uptake of inorganic nitrogen and amino acids by boreal tree species, the response of soil carbon and nitrogen dynamics to prescribed fire in the boreal forest, and the use of molecular tools to assess soil nitrogen dynamics. He is a member of numerous professional organizations including the Ecological Society of America, Soil Ecology Society, and the Soil Science Society of America. He is an investigator on the Bonanza Creek Long-term Ecological Research project and has actively promoted the development of the Schoolyard LTER program locally and nationally. He has served as Secretary of the Soil Ecology Section of the Ecological Society of America and as an Alaska Representative to the American Association for the Advancement of Science. He has participated on numerous advisory panels including NSF Ecosystems Studies, NSF Dissertation Improvement, NSF Collaborative Research at Undergraduate Institutions, and USDA Forest/Range/Crop/Aquatic Ecosystems. Funding sources include the U.S. Department of Agriculture and the National Science Foundation. Boone was appointed as an Aldo Leopold Leadership Fellow in 2001

Carol Brewer

Dr. Carol Brewer, an Associate Professor of Biology, joined the faculty at the University of Montana in 1993. She received a B.A. in Biology from California State University, Fullerton (1981), and went on to complete a B.S. in Science Education (1985), M.S. in Zoology and Physiology (1986), and Ph.D. in Botany (1993) at the University of Wyoming. She has research

programs and mentors graduate students and postdocs in physiological plant ecology and ecological education. Her work in physiological ecology focuses on comparative morphology, physiology, and ecology of plants, most recently in Andean Patagonia. Her lab group has studied the impact of strong oxidants on forest species (e.g., chlorine gas spilled after a train derailment, ozone), and the influence of fluctuating water levels on growth and reproduction of aquatic plants in reservoirs. Dr. Brewer is a national leader in ecology education. Current education endeavors with graduate students and postdocs in her lab include training teachers to use their schoolyards for leading ecological investigations, facilitating teacher research partnerships with ecologists, integrating research into introductory biology courses, evaluating nature films for accurate scientific content, and promoting ecological literacy in Latin America. The work of her lab has been funded by the National Science Foundation, the National Wildlife Foundation, the National Park Service, the Department of Energy, and the Fulbright Commission. Dr. Brewer is certified by the Ecological Society of America as a Senior Ecologist and has served the Ecological Society of America as the Chair of the Education Section, a member of the Program Committee and Ecological Education Awards Committee, and as chair of the Standing Committee on Education and Human Resources. She served on the Board of Directors of the Montana Natural History and Nature Center for five years. Dr. Brewer also has served on two National Research Council committees (Integrating Education in Biocomplexity Research and the Standing Committee on Science Education K-12), as well as on numerous grant review panels for the National Science Foundation. Currently she serves as an Associate Editor for Conservation Biology, and on the governing board of the Ecological Society of America (Vice President for Education and Human Resources).RESEARCH FUNDING: Principal Investigator with C. Snetsinger and L. Blank. BioBYTES: Connecting Teaching With Learning Through Web-Based Assessment. NSF ($499,997, pending).Principal Investigator with P. Alaback, L. Blank, D. Oberbillig, and M. Plautz. Ecologists, Educators, and Schools (ECOS) – Partners in GK-12 Education. NSF ($1, 956,123, pending).Co-Principal Investigator with J. Clark and B. Braatz. A Summer School at Duke University: Uncertainty and Variability in Ecological Inference, Forecasting, and Decision -- An Introduction to Modern Statistical Computation Project. NSF ($133,312, pending). Principal Investigator with K. Olson. 2001-2002. Partnerships for avian ecology between Montanan and Patagonian School Children. National Wildlife Federation. ($25,000).Principal Investigator. 2001. Patterns of Blister Rust Infection in the Greater Yellowstone Area. University of Wyoming - National Park Service Research Consortium. ($4,000).Principal Investigator with E. Caton, L. Blank, L. Mills, and C. Kushel. 2000 – 2002. Montana Teachers Investigate Ecology (MT-TIE). NSF ($286,055).Co-Principal Investigator with P. Kukuk, C. Zabinski, J. Gobert, and P. Hurley. 1999 – 2003. Project TRAIN – Training American Indians in Environmental Biology. NSF ($274,992).Project Director. 1998 - 2002. Integrated Biological Science Courses Organized Around Research Experiences: Project IBS-CORE at The University of Montana. Howard Hughes Medical Institute to The University of Montana ($1,400,000).Principal Investigator. 1998. Comparative Forest Ecology in Patagonian Argentina and Western Montana. With C. Wall. The Turner Foundation ($5,400).

Phillip Bromberg

Dr. Bromberg's prestigious medical and research career has spanned half a century with a focus on environmental effects on human health. He is a highly respected scientist and physician within his profession and on the Chapel Hill campus, where he currently serves as the Bonner Professor of Medicine and Scientific Director of the Center for Environmental Medicine, Asthma, and Lung Biology. Dr. Bromberg received his medical degree from Harvard Medical School and performed his residency at Peter Bent Brigham Hospital in Boston, MA. He also holds a B.S. from Queens College in Flushing, New York. The Center's research on the health effects of exposure to air pollutants recently merited a $16 million grant from the EPA, the latest example of a successful 22-year relationship between the two organizations. Dr. Bromberg is a leading member of numerous professional and honorary societies, including the American Thoracic Society and the American Federation for Clinical Research. He also has extensive experience serving on medical and environmental advisory committees, including the current chairmanship of the advisory board of the National Institute of Environmental Health Sciences Center in Urban Environmental Health at Johns Hopkins University. In addition to the EPA, he also receives funding from the National Institute of Environmental Health Sciences. Current Grant and Contract Support: EPA CR829522 - Cooperative Agreement with the U.S. Environmental Protection Agency. "Health Effects of Environmental Pollutants in Humans", P.A. Bromberg, M.D., P.I., 11/01/01 - 10/31/06. Annual direct costs: $1,706,605. (70% effort). [Continuously funded since 1980].1 RO1 HL66559-01 - NHLBI. "CD14 and LPS-Induced Inflammation in Chronic Bronchitis", D. B. Peden, M.D., P.I., 9/29/00 - 8/31/04. Annual direct costs: $225,000. (10% effort).Pending Grant and Contract Support National Institutes of Health, "O3 and LPS-Induced Airway Inflammation in Humans In Vivo", D. B. Peden, M.D., P.I., 12/1/03 – 11/30/08. Annual direct costs: $293,852. (10% effort). National Institutes of Health, "IL-13 and mucosal inflammation in childhood asthma", T. Noah, M.D., P.I., 12/15/03 – 12/14/08. Annual direct costs: $237,911. (5% effort).

Joseph Bunnell

As a Research Biologist for the USGS in Reston, Virginia, Dr. Bunnell is involved with a number of public health science activities in the US and abroad. He obtained his Ph.D. in Molecular Microbiology and Immunology from the Johns Hopkins University School of Public Health in 1999, his M.S. in Entomology from Montana State University in 1995, and his B.A. in Biology from the University of California at Santa Cruz in 1987. Conducting GIS analysis of Lyme disease; contributing to

Chinese residential coal combustion studies; leading research project of respiratory health effects of coal combustion-derived air pollution in the Navajo Nation; designing experiments to identify etiology of Balkan endemic nephropathy; acting as a liaison between USGS and NIH, NIEHS, CDC, WHO, NASA, DoD, state and local public health organizations, and university medical research and environmental science departments, 2001 - present. Many of his 40+ published technical papers, book chapters, and presentation abstracts address environmental health issues and reflect on the rigorous training in Epidemiological Ecology he received. He worked as a Lecturer of Chemistry at Texas A&M University, and completed a postdoctoral fellowship at the University of Texas Medical Branch, World Health Organization Collaborating Center for Tropical Medicine on an NIH training grant.

Luis Cifuentes

Professor Luis A. Cifuentes is the Interim Executive Associate Dean and Associate Dean for Research of the College of Geosciences, Texas A&M University. He received a B.A. in Chemistry with Honors from Swarthmore College in 1978, an M. S. in Marine Sciences from the University of Delaware in 1982 and a Ph. D. in Oceanography from the same institution in 1987. Dr. Cifuentes joined the Oceanography faculty at Texas A&M University in 1988. He has extensive experience in estuarine biogeochemistry, stable isotope geochemistry, and the application of stable isotopes to environmental studies. He has worked on methods for measuring the stable isotope ratios of carbon and nitrogen species and has applied these techniques to problems ranging from oil spill recovery in Prince William Sound, AK, to tracing pulp mill effluent in Perdido Estuary, FL, and to monitoring bioremediation strategies. Dr. Cifuentes was the chairman of the Gordon Conference on Estuarine and Coastal Process (June 1995), which had nitrogen cycling in ecosystems as its main focus. Dr. Cifuentes has participated in various workshops dealing with environmental issues such as the Alaska Oil Spill Bioremediation Workshop (1991) sponsored by U.S. EPA, the NECOP (Nutrient Enhanced Coastal Productivity) Workshop (1993) sponsored by NOAA, and the Principal Investigator Meeting sponsored by NOAA, the Biroemediation Risk Assessment Workshop sponsored by U.S. EPA and Environment, Canada (1995), and the recent NVODS Workshop(2003) on regional ocean observing systems. He was integrally involved in organizing and implementing of the Center for Atmospheric Chemistry and Environmental Policy at Texas A&M University. Dr. Cifuentes has participated on research programs funded by NSF, EPA, NOAA, DOD (SERDP) and USGS in addition to support by Texas state agencies. He has recently become active in the area of air pollution through his involvement in an EPA funded project to development joint multi-pollutant air quality modeling facilities and air monitoring stations for the Houston-Galveston Metropolitan Area.

Kenneth Cummins

Dr. Cummins is Interim Director, Institute for Forest and Watershed Management, Adjunct Professor of Fishery Biology Department, and Senior Advisory Scientist, California Cooperative Fishery Research Unit, Humboldt State University. BS Lawrence University, 1995; MS Univ. Michigan, 1957; PhD Univ. Michigan, 1961.Areas of expertise: Stream ecology, freshwater ecosystems, aquatic insects. Member and past Chair, Independent Science Board, CALFED (California Bay Delta Ecosystem Restoration Program); Executive Committee, and EPEC, SAB, EPA; National Representative, International Society of Theoretical and Applied Limnology; State of Oregon, Botkin Panel on Salmon -Timber Conflicts; International Union for the Conservation of Nature, Botkin Panel on sustainable fisheries and livelyhoods. Sources of recent grant/contract support:: USGS-BRD; USFS; National Council for Air and Stream Improvement; Simpson Natural Resource Company.

Virginia Dale

Dr. Dale is a landscape ecologist at Oak Ridge National Laboratory and adjunct faculty member in the Department of Ecology and Evolutionary Biology at the University of Tennessee. She received her Ph.D. from the University of Washington in mathematical ecology. Dr. Virginia H. Dale's primary research interests are in environmental decision making, forest succession, land-use change, landscape ecology, and ecological modeling. She has worked on developing tools for land management, vegetation recovery following the eruption of Mount St. Helens; forest development subsequent to insect outbreaks, fires, windthrows, and clear-cutting; effects of air pollution and climate change on forests; tropical deforestation in southeast Asia and the Brazilian Amazon; and integrating socioeconomic and ecological models of land-use change. Dr. Dale serves on the Science Advisory Board for the Grand Canyon Monitoring and Research Center, the Committee on Ecological Effects of Road Density of the National Academy of Sciences, and the US Scientific Committee for Problems of the Environment. She is also a member of the Department of Defense's Strategic Environmental Research and Development Program's Ecosystem Management Project. Dr. Dale has served on the National Academy of Sciences Ecosystems Panel, the "Committee of Scientists" appointed by the Secretary of Agriculture, and the Ecosystems Panel which reviews proposals submitted to the National Science Foundation (NSF). She was Chair of the US Regional Association of the International Association for landscape and has been on the Governing Board of the Ecological Society of America. She is currently on the editorial board for the journals Ecological Economics, Ecological Indicators, and Landscape Ecology. She is also the Editor-in-Chief of Environmental Management. Dr. Dale has served on various committees of the SAB, including approximately 5 years as a member of EPEC and several years on the RSAC. All her current support is from the Strategic Environmental Research and Development Program (SERDP) of the Department of Defense.

Urmillo Diwekar

Dr. Urmila M. Diwekar, is currently Professor in the Department of Chemical Engineering and the new Institute for Environmental Science and Policy, University of Illinois at Chicago (UIC). She is the first woman full professor in the history of UIC's department of chemical engineering. From 1991-2002 she was on the faculty of the Carnegie Mellon University (CMU), with early promotions to both the Associate and Full Professor levels. In chemical engineering, she has worked extensively in the areas of simulation, design, optimization, control, stochastic modeling, and synthesis of chemical processes. Dr. Diwekar has made major contributions to research on batch distillation including authoring the first book on batch distillation and this work is well recognized. Uncertainties are inherent in real world processes. Recognizing this fact, Dr. Diwekar started working in 1991 on stochastic modeling, efficient methods for uncertainty analysis, and optimization under uncertainty. These led her to productive contributions in fields as diverse as environmental management, nuclear waste disposal, molecular modeling, pollution prevention, and financial option theory. The interdisciplinary nature of the field developed into several research collaborations and in 1999 she founded the Center for Uncertain Systems: Tools for Optimization and Uncertainty (CUSTOM) at CMU to foster interactions between various industries, national laboratories and various academic disciplines. Recently, she has completed a breadth level book on Applied Optimization that is discipline independent. This book is the lead book in Applied Optimization Series of Kluwer Academic Publisher. Besides these two text/reference books, she has written number of book chapters and edited a book on tools and methods for pollution prevention, and conducted workshops. Dr. Diwekar is the author of more than 90 peer-reviewed papers in established journals and conferences, and over 120 presentations and seminars. She has chaired numerous conferences and sessions in national and international meetings. She has served as a member of the executive committee, and later as a Director of both the Computers and Systems Analysis (CAST) division and the Environmental division of the American Institute of Chemical Engineers (AIChE). She is the programming chair for the newly formed Sustainability forum. Besides academic research, she is the author of two commercial software packages (BdistSimOpt, Batch Process Technologies, W. Lafayette, IN, and MultiBatchDS, BPRC Inc., Allison Park, PA), has served as a consultant to more than 20 companies, and is on the Board of Directors of Access Holdings Incorporated. During the past five years, Dr. Diwekar has received grant support from the National Science Foundation, the Sandia National Laboratory, the National Renewable Energy Laboratory, the National Energy Technology Laboratory, the Environmental Protection Agency, the Pennsylvania Infrastructure Technology Alliance, Ford Motor Co., Mallinckrodt Chemicals, and BOC Gases. CUSTOM webpage: www.uic.edu/labs/custom

Richard Di Giulio

Richard T. Di Giulio is Professor of Environmental Toxicology in the Nicholas School of the Environment and Earth Sciences at Duke University, Durham, North Carolina. At Duke, he also serves as Director of the Integrated Toxicology Program and Director of the Superfund Basic Research Center (both are supported principally by NIEHS and U.S. EPA). He received a B.A. in comparative literature from the University of Texas at Austin (1972), an M.S. in wildlife management from Louisiana State University (1978), and a Ph.D. in wildlife biology/environmental toxicology from Virginia Polytechnic Institute and State University (1982). His research in aquatic and comparative toxicology emphasizes mechanistic studies of chemical toxicity and adaptation. Current studies focus on oxidative stress, pollutant metabolism, DNA interactions and genetic consequences, developmental perturbations, and fitness costs associated with adaptation. Additionally, he has organized symposia and workshops, and written on, the broader subject of interconnections between human health and ecological integrity. Dr. Di Giulio serves as an advisor for the Scientific Advisory Board of the US EPA and for the Canadian Network of Toxicology Centres. He is a member of the Society of Environmental Toxicology and Chemistry (SETAC) and the Society of Toxicology (SOT). Current and recent grant support for Di Giulio's research has been provided by NIEHS, U.S. EPA, and the Office of Naval Research.

Clifford Duke

Dr. Duke is the Director of Science Programs, Ecological Society of America, Washington, DC. Education B.A. Biology, University of Vermont, 1977Ph.D. Botany, Duke University, 1985M.A. Public Policy, Duke University, 1986ExpertiseEcological risk assessment, environmental impact assessment, aquatic ecology, and environmental policy. As Science Director at ESA, responsible for Science Office strategic planning, program budgeting and fundraising, managing cooperative agreements with Federal agencies, and supervising staff. Professional activities Society of Environmental Toxicology and Chemistry: President, Chesapeake-Potomac Chapter 2003, board member since 1999; past president and board member, Ohio Valley Chapter, 1992-1997; former member Government Affairs Committee; 1992 Annual Meeting Local Committee Member (Plenary Cochair, Risk Communication Session Chair, and Ecological Assessment at DOE Facilities Symposium Cochair)American Society for Testing and Materials: coordinator, New Activity Meeting on Risk Communication and Risk Management, 1996Society for Risk Analysis: Nominating Committee, 1995Ohio Comparative Risk Project: volunteer, 1997Hamilton County Environmental Priorities Project: volunteer,1997 Other professional memberships: American Association for the Advancement of Science Environmental Law Institute National Association of Environmental Professionals Sigma Xi Honorary Society; Society of American Military Engineers Recent grant and contract support: ESA projects in which I am involved are supported by EPA, NOAA, NSF, USDA, USGS, the Mellon Foundation, and the Packard Foundation

Hugh Evans

Hugh L. Evans, Ph.D. Professor of Environmental Medicine Education: Dr. Evans received his Ph.D. in Psychobiology from the University of Pittsburgh in Pittsburgh, PA in 1969. Postdoctoral Training: Dr. Evans was a Postdoctoral Fellow in Toxicology at the University of Rochester School of Medicine and Dentistry during 1970-1971. In 1959-1963, he received a B.A. (Psychology) from Rutgers University, New Brunswick, NJ; and in Graduate School in 1963-1965, M.A. (Psychology) at Temple University, Philadelphia, PA. He was elected Fellow in Psychopharmacology of the American Psychological Association in 1982. Other Responsibilities: Current professional work includes: Executive Committee of the Board of Trustees of the Association for Assessment and Accreditation of Laboratory Animal Care; Board of Directors and Past President of the Behavioral Toxicology Society; Research Program reviewer and Research Scientists Review Panel at the National Center for Toxicological Research; Peer Reviewer for the Center for Indoor Air Research; Review Panel for Environmental Neurobiology Research grants at the Environmental Protection Agency; Faculty Committee for LCME accreditation at NYU School of Medicine; Co-Chair of Academic Affairs Committee at NYU School of Medicine; Faculty Council at NYU School of Medicine. Previously, he was on Editorial Boards of the Journal of Pharmacology & Experimental Therapeutics and Neurotoxicology & Teratology. Research Interests: Neurotoxicology I have been the Principle Investigator of 7 peer reviewed, extramural research grants, totalling over $5 million over the past 20 years. In addition, I have been co-investigator on major multidisciplinary Center grants, Program Projects, and Training grants. My current research concerns experimental models of stress and effects relevant to chemical warfare and bio-terrorism. The current work is funded by New York University.

Jurgen H. Exner

Jurgen H. Exner is a principal and president of JHE Technology Systems, Inc., a consulting company specializing in waste management, technology commercialization and application, and legal support services. He obtained a Ph. D. in physical organic chemistry from the University of Washington in 1968 and a B. S. with highest distinction from the University of Minnesota in 1963. Dr. Exner has 28 years of experience in hazardous waste management, seven of which were as an executive for waste management companies, and worked an additional seven years in the chemical industry. He has experience in assessing environmental information and developing effective solutions based on regulatory, economic, technical, social, and legal considerations. He has expertise in waste treatment and management, site investigation and feasibility studies, remediation, and in the application of thermal, chemical, physical, and biological treatment methods to solve environmental problems. He has evaluated and commercialized technology by combining market and regulatory knowledge with process development skills. He has carried out laboratory treatability, pilot plant and field demonstrations through startup of operations. Dr. Exner has built and managed technical groups and developed management strategy for entering new market areas. He provides peer review for government and technical publications. Dr. Exner has published about 38 technical papers, holds eight patents, has edited three books on hazardous waste treatment, and given numerous presentations. His recent industrial positions were as Senior Vice President, Technical Development, OHM Corporation, and Vice President, Technology, International Technology Corporation. In these functions, he was responsible for multi-million dollar budgets and 15-45 technical personnel at multiple US locations. He participated in workshops by the National Academy of Science and the National Science Foundation, lectured for U.S. EPA and ACS, and was a member of U.S. Air Force Ad Hoc Committee on Hazardous Waste (1984). He is Associate Editor of the Air & Waste Management Association Journal and was a member of the National Research Council Mixed Waste Committee 1995-1999.Dr. Exner was chair of the East Tennesseee Section of ACS in 1981, has been on the executive committee of the Division of Environmental Chemistry since 1985, was the Division Treasurer from 1991-1995, and chair from 1996-1997. He has been a Division councilor since 1999, and has been an associate and member of the ACS Board Committee for Environmental Improvement since 1999 and is currently serving as its chairman. He was American Chemical Society Tour Speaker in 1992, 1986, and 1985 on The Role of Technology in Hazardous Waste Remediation." Currently Dr. Exner holds a consulting contract with the privately owned Environmental Chemical Corporation, Burlingame, California.

Andrew Friedland

Dr. Andrew J. Friedland is Professor and Chair of the Environmental Studies Program at Dartmouth College. Friedland has B.A.s in Biology and Environmental Studies (double major) (1981) and a Ph.D. in Geology (1985), all from the University of Pennsylvania. His research has focused on understanding the effects of atmospheric deposition of pollutants on elemental cycling processes in high-elevation forests of New England and the Northeastern United States. He has examined the processes and behavior of trace elements such as lead, copper, zinc, nickel and cadmium and major elements such as nitrogen and calcium on vegetation, soils and water. In a number of related projects, he has described the decline of red spruce in the mountains of New England and has examined water relations in conifers during winter. Friedland has published approximately 40 peer-reviewed articles on these topics. He has written one book, co-authored with biologist Carol Folt, Writing Successful Science Proposals (Yale University Press, 2000). Dr. Friedland has taught introductory and advanced environmental science courses as well as soil science, forest biogeochemistry and an interdisciplinary course on science and literature. He was a member of the Citizens Advisory Panel of the Strategy for Vermont's Third Century, an environmental risk assessment program conducted by the State of Vermont and the U.S. EPA. From 1995-1998, he chaired the College

Board Advanced Placement Environmental Science development committee. This committee designed the first Advanced Placement course in environmental science that was offered nationwide for the first time in 1998. Approximately 25,000 students took the most recent AP Environmental Science exam earlier in 2002. Dr. Friedland is a member of the Soil Science Society of America, the Ecological Society of America and the American Association for the Advancement of Science. He is currently on the editorial boards of the Journal of Sustainable Forestry and Science of the Total Environment. Dr. Friedland has received funding from the National Science Foundation, the US Forest Service, the Environmental Protection Agency and private foundations.

Anne Marie Gebhart

Dr. Gebhart is Director of the Drinking Water Program at Underwriters Laboratories (UL). Previously, she served as Executive Officer of the American Society for Clinical Nutrition and Managing Editor of the American Journal of Clinical Nutrition. From 1990-1997, she worked in standards development and conformity assessment at NSF International. Dr. Gebhart also worked as Supervisor of Safety Assessment for Parke-Davis Pharmaceutical Division of Warner-Lambert Co. In this position, she managed the safety assessment process for all domestic and international new drug submissions. She holds an MPH degree in Environmental and Public Health and a PhD in Toxicology, both from the University of Michigan. Dr. Gebhart also completed post-doctoral research at the University of Michigan in the Department of Pharmacology.While at NSF International, Dr. Gebhart administered all technical services related to testing and product certification in the areas of drinking water, wastewater, food safety, and sanitation. She had responsibility for the operations,quality and credibility of the physical testing, microbiology, and analytical chemistry laboratories as well as toxicology,risk assessment, engineering, and research services. She oversaw the submission and implementation of technical proposals to federal agencies, including a grant from the USEPA for $2.3 million to verify technology for small drinking water systems. She has also led all committee work related to the development of health-based standards related to drinking water and indoor air quality. Currently, she is a member of the American Chemical Society's Committee for Environmental Improvement and the Public Interest Advisory Forum of the American Water Works Association. She has also served on the Environmental Laboratory Federal Advisory Board and the Board of Governors for the University of Michigan's School of Public Health.

Peter Robert Grace

Dr. Grace is a soil bio-geochemist and natural resource management specialist with 15 years international experience in the Americas, Asia, Australia and Africa. Ph.D. in Soil Microbiology from the University of Queensland in Australia. As an expert in terrestrial ecosystem science, greenhouse gas emissions and sustainable agriculture he has been heavily involved in international global climate change issues, especially the reduction of greenhouse gas emissions and carbon sequestration in agricultural systems. He is an internationally respected expert in the development of sustainable farming systems and environmental impact assessment in agriculture, having produced the first comprehensive report (on behalf of USAID) on the impact of international agricultural research and development on greenhouse gas emissions and global climate change. He has been an expert consultant to the Food and Agricultural Organization (FAO), International Atomic Energy Agency (IAEA), United Nations Environmental Program (UNEP), the Intergovernmental Panel on Climate Change (IPCC), International Centre for Research in Agroforestry (ICRAF), the International Livestock Research Institute (ILRI) and USAID. He was formerly Senior Soil Scientist of the International Center for Wheat and Maize Research, Lead Scientist for the Consultative Group for International Agricultural Research (CGIAR) Inter-Center Working Group on Climate Change and is currently Principal Scientist for Natural Resource Management Systems International. Funded by Consortium for Agricultural Soils Mitigation of Greenhouse Gases through Michigan State University and the Cooperative Research Center for Greenhouse Accounting in Australia.

Annette Guiseppi-Elie

Dr. Guiseppi-Elie is a Senior Consultant on Exposure and Risk Assessment issues for the DuPont Company. She has served on a number of scientific entities in her role as technical expert and advocate for the use of sound scientific principles and data in conducting environmental health risk assessments. These organizations include the USEPA Science Advisory Board, the Mickey Leland Center National Urban Air Toxics Research Center, the International Programme on Chemical Safety's Planning Committee on Harmonization of Exposure Assessment and the American Chemistry Council's Human Health Exposure Assessment Technical Implementation Panel. She is past Chair of the American Industrial Heath Council's Environmental Health Risk Assessment Committee. Her expertise is in the areas of site and risk assessment, specifically, exposure assessments and including environmental fate and transport processes. Dr. Guiseppi-Elie has conducted environmental site assessments and risk assessments both in the US and internationally. Her doctoral research focused on the fate and transport of dioxins in the environment. Her current research interests are in the areas of integrated/cumulative exposure and risk assessment (e.g., The American Chemistry Council Comprehensive Chemical Eposure Framework) and the relationship between indoor, outdoor and personal air exposures (e.g., RIOPA Study for the Leland Center and the World Trade Center Indoor Air Assessment). CURRENT POSITION 1999 - Senior Consultant, Dupont Engineering, Wilmington, DEEDUCATION: Ph.D. Civil Engineering, (Environmental), University of Maryland, Maryland, USA, 1987. M.Sc. Pollution and

Environmental Control, University of Manchester (UMIST), Manchester, England, 1980. M.Sc. Agriculture (Entomology), University of the West Indies (UWI), St. Augustine, Trinidad & Tobago, 1979. B.Sc. Natural Sciences, University of the West Indies (UWI), St. Augustine, Trinidad & Tobago, 1977.PROFESSIONAL AFFILIATIONS: Member, Planning Committee On Harmonization of Exposure Assessments, WHO International Program on Chemical Safety Member, Integrated Human Exposure Committee, USEPA Science Advisory Board Member, USEPA Workgroup on Environmental Indicator 725 on Vapor Intrusion from the Subsurface Member, American Chemical Council, Human Health Exposure Assessment Technical Implementation Panel Member, Texas Natural Resource Conservation Commission Risk-based Guidance Development Workgroups Member, Pennsylvania Cleanup Standard Science Advisory Board Member, American Chemistry Council, Hazardous Waste Identification Rule (HWIR) Science Group Member, World Trade Center Indoor Air Exposure Panel (2002) Member (1996-2001), Mickey Leland National Urban Air Toxics Research Center, Science Advisory Panel (Currently, Co-Chair of the RIPOA Study Review for the Center/HEI) Chair (1993-1997), American Industrial Health Council, Env. Health Risk Assessment Committee Member (1995 - 2001), American Industrial Health Council, Ecological Risk Assessment Committee Member (1999- 2000), Steering Committee New Jersey Comparative Risk project Member (1995 - 2000), ASTM E 50.01 and E50.04 Task Groups Member, Science Advisory Board, University of Massachusetts: Contaminated Soils Conference 1993-2000Member, Science Advisory Board, First Latin American Contaminated Soils Conference (1998)

Charles Haas

Dr. Haas is the L.D. Betz Professor of Environmental Engineering, Drexel University Education: BS (Biology, 1973): Illinois Institute of Technology MS (Environmental Engineering, 1974): Illinois Institute of Technology PhD (Environmental Engineering, 1978): University of Illinois at Urbana-Champaign Research interests center around the assessment of risk from and control of risks (by treatment interventions) from human exposure to infectious agents. Broad interests in water and wastewater treatment and risk assessment. Also prior experience with hazardous waste treatment, particularly heavy metals. Prior experience includes service on a number of NRC and WHO committees. Past chairman of AWWA and WEF Disinfection Committees. Recent funding: AWWARF, City of Philadelphia, Soap and Detergent Association.

Joshua Hamilton

Dr. Hamilton is a Professor of Pharmacology and Toxicology, Dartmouth Medical School Adjunct Professor of Chemistry, Dartmouth College Director, Center for Environmental Health Sciences at Dartmouth Director, Dartmouth Toxic Metals Program Project Director, Dartmouth Molecular Biology & Proteomics Core Facility Education: Cornell University, Ithaca, NY 14853. 1982 to 1985. Ph.D., Genetic Toxicology, 1985. Cornell University, Ithaca, NY 14853. 1980 to 1982. M.S., Genetics, 1982. Bridgewater State College, Bridgewater, MA 02324. 1976 to 1980. B.S., Biology, 1980 (cum laude).Postdoctoral Research Fellow (NIEHS, Norris Cotton Cancer Center and Department of Chemistry), Department of Chemistry (Karen E. Wetterhahn, advisor), Dartmouth College, 1985 to 1988.Areas of Expertise / Research Interests: Dr. Hamilton's general interests are in the area of molecular toxicology and pharmacology. His specific interests and expertise are in the areas of toxic metal toxicology, molecular carcinogenesis, genetic toxicology, and development of new pharmacological agents for treatment of cystic fibrosis and multidrug resistance in cancer. Many of the chemicals of environmental and occupational concern are believed to act, at least in part, by targeting specific macromolecules including defined regions of DNA-chromatin, transcription factors, cell signaling pathways or other key cellular components to elicit changes in gene expression within certain target cells that contribute to the etiology of diseases such as cancer, diabetes and cardiovascular disease. Interestingly, many of the pharmacological agents used against these diseases also target these same pathways and genes. Dr. Hamilton's central research interest is in elucidating the molecular mechanisms by which these chemicals selectively alter gene expression to either promote or inhibit cancer and other pathophysiological processes. Advisory Committees, etc.: Program Reviews: Member, External Advisory Committee, Massachusetts Institute of Technology Center for Environmental Health Sciences (NIEHS Center Grant) (1997 to present).Report Reviews: External Reviewer, National Research Council Report, Arsenic in Drinking Water, 2001 Update, National Academy of Sciences, National Academy Press, 2001.Grant Reviews:Ad Hoc Reviewer, Chemical Pathology A (CPA) Study Section, National Institutes of Health, June 1989, June 1993, June 1996.Ad Hoc Reviewer, Experimental Therapeutics A (ET1) Study Section, National Institutes of Health, June 1996.Chair, Special Emphasis Panel, Experimental Therapeutics A (ET1) Study Section, National Institutes of Health, December 1996.Ad Hoc Reviewer, Metabolic Pathology (MEP) Study Section, National Institutes of Health, December 1997.Ad Hoc Reviewer, Alcohol and Toxicology I (ATI) Study Section, National Institutes of Health, December 1998, February 1999.Ad Hoc Reviewer, W.M. Keck Foundation Faculty Fellowship Program, February 1999.Ad Hoc Reviewer, Center for Research on Environmental Disease Grant Program, M.D. Anderson / University of Texas, April 1999.Ad Hoc Reviewer, Kentucky Science & Engineering Foundation Grant Program, November 2001.Member, Special Review Committee, Environmental Sciences / Developmental Toxicology Grant Program, National Institutes of Health, December 2001.Member, Review Panel, Beckman Foundation Scholars Program, 2001 - present. Chair, Special Review Committee, NIEHS / Superfund Basic Research Program Small Business Innovative Research (SBIR) Grants, National Institutes of Health, March 2002.Ad Hoc Reviewer, University of Arizona Center for Toxicology Pilot Projects Program, June 2002.Ad Hoc Reviewer, United Kingdom National Environmental Research Council Environmental Genomics Research Grants Programme, June 2002.Manuscript

Reviews: Ad Hoc (1988 to present): Archives of Biochemistry and Biophysics, Biochemica Biophysica Acta, Biochemical Journal, Biochemical Pharmacology, Cancer Research, Carcinogenesis, Cell Growth & Differentiation, Chemical Research in Toxicology, Chemico-Biological Interactions, Comparative Biochemistry & Physiology, Environmental & Molecular Mutagenesis, Environmental Health Perspectives, Hepatology, Journal of Biological Chemistry, Journal of Pharmacology & Experimental Therapeutics, Journal of Toxicology & Environmental Health, Molecular Carcinogenesis, Molecular Pharmacology, Toxicological Sciences, Toxicology and Applied Pharmacology, Xenobiotica. Editorial Board: Toxicology and Applied Pharmacology (1997 to 1998), Chemico-Biological Interactions (1998 to present).National Committees: Member, Directors Association, NIEHS Superfund Basic Research Program, 1997 to present; President, 2002 to present.Co-Organizer, Karen E. Wetterhahn Memorial Symposium, American Chemical Society Meeting, Boston MA, August 23-27, 1998.Organizer and Chair, Society of Toxicology Continuing Education Course, "Methods in Cell Signaling," SOT Meeting, Seattle WA, March 1998.Member, Society of Toxicology Program Committee, 1998 to present. Organizer and Chair, NIEHS "Arsenic in New England" Scientific Conference, Manchester NH, May 29-31, 2002.Regional Committees: Organizer, Ninth Annual New England Membrane Enzyme Group (Nutmeg) Conference, Center Harbor NH, November 10-12, 1991.Organizer, Tenth Annual New England Membrane Enzyme Group (Nutmeg) Conference, Center Harbor NH, November 8-10, 1992.Member, New Hampshire Healthy NH 2010 Committee, NH Department of Health and Human Services, Concord NH, May - September 2000.Member, Montshire Museum of Science Corporation, 2000 to present. Member, New Hampshire Arsenic Consortium (Dartmouth Toxic Metals Program, NH Dept. Health & Human Services, NH Dept. Environmental Services, U.S. Geological Survey, U.S. EPA region I, Agency for Toxic Substances & Disease Registry), 2000 - present. Member, New Hampshire Public Health Biomonitoring Committee, Dept. Health & Human Services, 2002 - present. Member, Montshire Museum of Science Board of Trustees, 2002 to present. Research Funding: As Principal Investigator - Current:4/00 - 3/05. NIH / NIEHS Program Project P42 ES07373, Project Director of "Toxic Metals in the Northeast: from Biological to Environmental Implications," total direct costs (5 years) $10,457,254. As Principal Investigator: Project 2, "Effects of carcinogenic metals on gene expression," total direct costs $975,301; "Administrative Core," total direct costs, $917,864; "Molecular Biology Core Facility," total direct costs $841,837; "Education and Training Core," total direct costs $562,002.4/01 - 3/03. Cystic Fibrosis Foundation Grant HAMILT01GO, "Anthracyclines for treatment of CF," total direct costs $129,600.4/02 - 4/03. NIH / NCI Contract 263-MQ-209007, "NCI Contract to measure arsenic in water samples," total direct costs $7,620.5/02 - 12/03. BioReliance Contract BCR-1108-28, "Selenium determination in association with selective tumors," total direct costs $28,050.9/02 - 8/07. NSF BE/GEN-EN Research Grant DEB-0221837, "Development of methods linking genomic and ecological responses in a freshwater sentinel species," total direct costs $2,000,000. Pending:None.As Co-Investigator - Current:9/02 - 6/06. NIH Research Grant R01 ES11819, "Arsenic effects on glucocorticoid receptor action," (P.I. Jack E. Bodwell), total direct costs $900,000. Pending:7/03 – 6/06. NIH Research Grant R01 CA098889, "DNA repair gene polymorphisms and pancreatic cancer," (P.I. Eric J. Duell), total direct costs $600,000. This received a 192 priority score, 18.2 percentile from EDC2 in 3/03.9/03 – 8/08. NIH NCRR COBRE Program Project Grant, "Cellular and Molecular Mechanisms of Lung Disease," (P.I. Bruce A. Stanton), total direct costs $8,000,000. Co-Director of program project, Director of Proteomics Core, Senior Mentor on Project 4, "Respiratory effects of air pollution in New Hampshire" (P.I. Melinda Treadwell), Advisor on Project 5, "Environmental epidemiology of lung cancer in New Hampshire: a multilevel approach using GIS and case-control methods." Review date July 2003.

Joseph Helble

Joseph J. Helble is Professor and Head of the Department of Chemical Engineering at the University of Connecticut (UConn). Professor Helble is a 1982 summa cum laude B.S. graduate of Lehigh University in chemical engineering, and a 1987 chemical engineering Ph.D. graduate of the Massachusetts Institute of Technology. His research is primarily in the area of air pollution, with specific activities and interests in combustion-derived particulate matter formation and control, trace metal and air toxics air pollutants, air quality modeling, ambient particulate matter, carbon dioxide capture, and particle coalescence. Dr. Helble also leads a research program in the area of nanoscale materials processing. He is the author of over 90 publications, primarily in the air pollution field, and is a member of the editorial board of the journal Fuel Processing Technology. Prior to joining the UConn faculty in 1995, Professor Helble spent 8 years at Physical Sciences Inc., a small business specializing in environmental and energy technology research and development. He also spent a fellowship period at U.S. EPA headquarters in Washington D.C as a science and policy fellow of the American Association for the Advancement of Science (AAAS), and received the Barnard Award from AAAS for outstanding work as an EPA Fellow in 1993. Dr. Helble is active in the American Association of Aerosol Science, where he recently served as Chair of the Combustion Aerosols Working Group, the American Chemical Society (Fuel Chemistry Division), and the American Institute of Chemical Engineers, and is a member of the CT DEP SIPRAC (State Implementation Plan Revision Advisory Committee). He has also served on numerous NSF advisory and review panels in environmental engineering and in combustion. His current research is supported by an EPA STAR grant, NASA, DOE, the Department of Defense, and the National Science Foundation.

Margaret James

Margaret O. James, Ph.D. is Professor and Chair of the Department of Medicinal Chemistry, College of Pharmacy, University

of Florida, and director of the University of Florida Superfund Basic Research Program project grant. She received her B.Sc.(honours) in chemistry from University College London in 1969 and her Ph.D. in organic chemistry in 1972 from St. Mary's Hospital Medical School, University of London, under the direction of Prof. R.T. Williams. She took up a three-year post-doctoral fellowship in the pharmacology branch of the National Institute of Environmental Health Sciences (NIEHS), North Carolina, under the supervision of Drs. J.R. Fouts and J.R. Bend. She was then appointed as a research associate then senior staff fellow at the NIEHS satellite laboratory at the Whitney Marine Research Lab., St. Augustine, for 5 years. She joined the faculty of the Department of Medicinal Chemistry, with a joint appointment in the Department of Pharmacology and Therapeutics, College of Medicine, in 1980. She is a member of the interdisciplinary toxicology graduate program at the University of Florida. Dr. James' research interests are in the biotransformation pathways involved in the formation or detoxification of chemically reactive metabolites of xenobiotics. She is particularly interested in the bioavailability and biotransformation of environmental pollutants whose toxicity is linked to biotransformation. Her research is funded by NIEHS, at present through the Superfund Basic Research Program Project.Dr. James has served on the Environmental Health Sciences Review panel, National Institute of Environmental Health Sciences (1991-5), and the Toxics Advisory Committee, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, 1992 – 1994. She was elected as secretary of the International Society for the Study of Xenobiotics in 1999 with a term of service from 2000-2003. She is a former member of the editorial board of "Chemico-Biological Interactions" and currently serves on the editorial boards of "Drug Metabolism and Disposition" and "Aquatic Toxicology". She is the guest editor of a special volume of Marine Environmental Research to be published in 2004.

Michael Jayjock

Dr. Michael A. Jayjock is Senior Research and EHS Fellow and Manager, Risk Assessment, in the Toxicology Department of Rohm and Haas Company, where he has served in various technical positions since 1969. In his current position he is responsible for determining the human health risk from exposure to company products, reactants, and intermediates. He has a Ph.D. in Environmental Engineering from Drexel University, Philadelphia, Pennsylvania, where he also received his Master of Science degree in Environmental Science and Occupational Health. Dr. Jayjock is a Fellow of the American Industrial Hygiene Association and Diplomat of the American Board of Industrial Hygiene (CIH). He has served on various committees of the American Industrial Hygiene Association: Committee on Exposure Assessment Strategies, Exposure Strategies Modeling Subcommittee, Exposure Strategies Expert System Subcommittee, Committee on Risk Assessment, and Low-Dose Estimation Task Group. He is a Member of the British Occupational Hygiene Society and ASTM member of Committee D22 on Sampling and Analysis of Atmospheres. In addition, he has served as a Governing Board Member of the International Society for Exposure Analysis (ISEA) 1995-1998, President of the Philadelphia Chapter of Society for Risk Analysis 1993-1994, Councilor for the Philadelphia Chapter of the Society of Risk Analysis 1994-1996, and Advisory Board Member for the Drexel School of Environmental Science, Engineering and Policy 1998-2002.Dr. Jayjock has expertise in such areas as exposure modeling and human exposure to environmental pollutants, human health risk assessment, and uncertainty analysis. He has published extensively in peer-reviewed publications and served from 1998-2003 as an Editorial Board Member for the American Industrial Hygiene Journal. He has made numerous technical presentations, including at the American Industrial Hygiene Conference, International Society of Exposure Assessment Conference, and the Air Toxics Monitoring Workshop to Support EPA's Integrated Urban Air Toxics Strategy. His wide service on advisory committees includes: U.S. EPA's Office of Pollution Prevention & Toxics - Voluntary Children's Chemical Evaluation Program (VCCEP); Peer Consultation Panel on Flame Retardants, 2003; U.S. EPA Science Advisory Board, Executive Committee, Human Health Research Strategy Panel, November 2002; U.S. EPA Science Advisory Board Consultant 2001-2003 - Integrated Human Exposure Committee; U.S. EPA Science Advisory Board Member 1998-2001 - Integrated Human Exposure Committee (IHEC); and National Research Council - National Academy of Sciences, as a Member of the Committee to Review Risk Management in the DOE's Environmental Remediation Program, the Committee on Advances in Assessing Human Exposure to Airborne Pollutants, and the Committee on Toxicology, Subcommittee on Risk Assessment of Flame-Retardant Chemicals. In addition, Dr. Jayjock has extensive teaching experience, including his work as Course Director Instructor: Risk Assessment and Intermediate Exposure Modeling - University of North Carolina Education Research Center, Summer Institute 1995-2001 and as Guest Lecturer - University of Pennsylvania Medical School, Residency Program for Occupational Medicine 1998-Present.

Michael Kaplowitz

Prof. Kaplowitz is an Associate Professor in the Department of Resource Development, an interdisciplinary unit at MSU. He also serves as a member of the faculty of the Environmental Science and Policy Program at MSU. Education : MICHIGAN STATE UNIVERSITY, East Lansing, Michigan Ph.D. in Resource Development and Resource Economics (1997)UNIVERSITY OF MICHIGAN, Institute for Social Research, Ann Arbor, Michigan CIC Scholar, Survey Research Center Summer Institute (1996)JOHNS HOPKINS SCHOOL OF INTERNATIONAL STUDIES, Washington, D.C.M.A. in Latin American Studies, International Economics & Environmental Policy (1992)DUKE UNIVERSITY SCHOOL OF LAW, Durham, North Carolina. J.D. (1986)UNION COLLEGE, Schenectady, New York.B.S. in Industrial Economics, cum laude (1983)He has both a J.D. and a Ph.D. focused on resource management and economics. He has extensive experience in water management problems and in

issues of environmental valuation. He is serving as a Principal Lead Author in the Millennium Ecosystem Assessment for "Inland Water Systems," and will be a contributor to a SETAC Pellston Workshop on environmental valuation. He is exceptionally experienced in working in interdisciplinary teams, and has the strong advantage of graduate training in law, economics and resource management. He has been funded by the joint NSF/EPA environmental valuation program, as well as by various state and MSU programs.

Arturo Keller

Dr. Arturo A. Keller is Associate Professor, Environmental Biogeochemistry, at the Bren School of Environmental Science and Management. He holds a joint appointment in Mechanical and Environmental Engineering at UCSB. Dr. Keller received his PhD from Stanford University, in Civil and Environmental Engineering, with a minor in Petroleum Engineering. He also holds an MS from Stanford and a BS in Chemical Engineering from Cornell University. Dr. Keller has over eleven years of industrial experience, between his undergraduate and graduate degrees. Based on his previous work in industry, Dr. Keller has developed a keen interest for incorporating leading edge science in policy and management decisions. His current research interests are in the areas of pollutant fate & transport, water quality management, remediation technologies and pollution prevention. His research ranges from development of scientific concepts to understand the movement of pollutants in the environment through experimental work, to the development of numerical tools that provide policy makers and environmental managers the ability to make decisions with less uncertainty. Dr. Keller's research over the years has spanned the range of scales from a single pore, through the watershed scale, to the global scale. In addition to the scientific issues involved, Dr. Keller is interested in the development of management strategies to suit the characteristics of each site, minimizing risk at least cost. Dr. Keller was an important contributor to the major study on the « Health and Environmental Assessment of MTBE » study conducted by the University of California in 1998, funded by California Senate Bill 521 in 1998 and administered through a competitive process through the UC Toxic Substance Research and Training Program. Dr. Keller's role was to conduct a major review of applicable technologies for remediation of contaminated sites, above and below ground. In addition, Dr. Keller collaborated with Dr. Linda Fernandez to piece together a Cost-Benefit Analysis for California, comparing different gasoline formulation. These studies were presented in public hearings to the Governor of California and the various relevant state agencies, to make a decision on MTBE as mandated by CA SB 521. Another of Dr. Keller's focus area has been the detection of NAPLs (organic liquids such as gasoline, oils, solvents, creosotes, tars, etc.) in the subsurface, with a particular interest in denser than water NAPLs (DNAPLs), which have been a major challenge. Although it is difficult to characterize a DNAPL site because of the complex path these pollutants take as they migrate through the soil, it is nevertheless extremely important to do so to design an appropriate risk management and/or remediation strategy. In collaboration with Dr. Mark Kram, the approach has been to exploit Laser Induced Fluorescence as a method for detecting commingled organics (e.g. chlorinated solvents and greases or oils). Dr. Keller also conducts research and consulting in the area of watershed management, related to the Total Maximum Daily Load component of the Clean Water Act. He currently serves as facilitator and modeler for a large stakeholder group in the Santa Clara River, and has done consulting work for the San Francisco Regional Water Quality Control Board on some other TMDL programs. Dr. Keller is also a scientific advisor for the Southern California Association of Governments, to assist them in the development of long-term land use and transportation planning strategies with regards to minimizing the impact on the watershed components. This includes the development of a multi-billion dollar investment plan for Best Management Practices across Southern California (over 150 cities).Dr. Keller is a member of the American Geophysical Union (AGU), the American Water Resources Association (AWRA), the Association of Environmental Engineering and Science Professors (AEESP), the International Society for Industrial Ecology (ISIE), the American Chemical Society (ACS), the National Ground Water Association (NGWA) and the Society for Environmental Toxicology and Chemistry (SETAC). Dr. Keller has chaired sessions at AGU and SETAC. He is also on the Advisory Board of the Southern California Chapter of SETAC. In addition to serving a wide number of committees on campus, Dr. Keller was a Member of the Executive Committee of the University of California Toxic Substances Research and Teaching Program (UC-wide program) from 2000 to 2003, a Member of the Advisory Board of the Institute of Crustal Studies, and a Member of the Chancellor's Advisory Board on Outreach Activities. Dr. Keller has managed over $1,300,000 in research grants over the past six years, including grants from USEPA NCERQA, USGS, CA Water Resources Center, CA State Water Resources Control Board, CA Dept. of Transportation, UC Toxic Substances Research & Teaching Program, Electric Power Research Institute, Los Alamos National Lab, private firms (on MTBE remediation technologies) and non-profit organizations.

Charles Kolb

DR. Charles E. Kollb is currently President and Chief Executive Officer of Aerodyne Research, Inc. EDUCATION Ph.D. in Physical Chemistry, Princeton University, 1971M.A. in Physical Chemistry, Princeton University, 1968S.B. in Chemistry, Massachusetts Institute of Technology, 1967EXPERIENCE He joined Aerodyne as a Senior Research Scientist in 1971. Since joining Aerodyne, his personal areas of research have included atmospheric and environmental chemistry, combustion chemistry, chemical lasers, materials chemistry, and the chemical physics of rocket and aircraft exhaust plumes. He is the author or co-author of over 150 archival publications in these fields. In the area of atmospheric and environmental chemistry, Dr. Kolb initiated Aerodyne's programs for the identification and quantification of sources and sinks of trace

atmospheric gases and aerosols involved in regional and global pollution problems, as well as the development of spectral sensing techniques to quantify soil pollutants. Specific atmospheric instrumentation developments include innovative tunable infrared laser differential absorption spectrometer (TILDAS) instruments for both remote, open path and in situ sampling measurements and aerosol mass spectrometers for real-time analysis of airborne aerosol concentrations, size distributions and chemical compositions as a a function of particle size. He has also motivated and designed chemical kinetic and molecular spectroscopy laboratory programs which provide gas phase and gas/surface kinetic rate parameters for atmospheric modeling and quantitative spectroscopic parameters needed to design in situ measurements of trace species important in tropospheric, stratospheric and mesospheric photochemistry. He has also developed models of aircraft and rocket exhaust plume/wake chemical kinetics, condensation physics and dispersion processes critical to the systematic assessment of the impact of aerospace systems on the chemical structure of the upper troposphere and stratosphere. He has been a member of numerous government and National Academy of Sciences/National Research Council committees dealing with atmospheric and environmental chemistry issues (listed above in biographical data). Dr. Kolb received the 1997 Award for Creative Advances in Environmental Science and Technology from the American Chemical Society. He has been elected a fellow of the American Physical Society, the Optical Society of America, the American Geophysical Union, and the American Association for the Advancement of Science; and has served as the atmospheric sciences editor of the journal, Geophysics Research Letters (1995-1999). He has received research funding from numerous federal agencies including NASA, NSF, DOE, NOAA, EPA, DOT and DOD offices such as DARPA, ARO, ONR, AFOSR, DNA (noe DTRA) and SERDP. He has also been funded by private sector sources including EPRI, GRI, CRC, AFEAS and CMA (now ACC).

Guy Lanza

Guy R. Lanza is a Professor of Microbiology and Director of the Environmental Sciences Program at the University of Massachusetts at Amherst, and Director of the Graduate Program in Environmental Toxicology and Risk Assessment. Dr. Lanza has a Ph.D. in Biology/ Environmental Microbiology from Virginia Polytechnic Institute and State University. Dr. Guy R. Lanza has been involved in research, teaching, curriculum development, and consulting in several areas of the environmental sciences including ecotoxicology, environmental impact assessment, applied and environmental microbiology, aquatic ecology, and water quality for more than 30 years. He has completed studies to develop and implement novel methods for measuring and monitoring ecotoxicological effects in soil, water, and sediments, including sediment microbial enzyme activity tests for detecting toxicant impacts. He has also directed several research projects on bioremediation and phytoremediation strategies suitable for hazardous waste sites. Dr. Lanza has also done research on the ecology of infectious diseases and is currently involved in environmental impact assessments of several major hydroelectric dam projects in Asia and Africa. Dr. Lanza is Editor-in-Chief of the International Journal of Phytoremediation (CRC Press) and serves on the Editorial Board of the Journal of Environmental Toxicology and Water Quality (John Wiley and Sons). Dr. Lanza's recent research has focused on the restoration of damaged habitat, particularly the remediation of contaminated soil, sediments, and water and has been funded by the Massachusetts Department of Environmental Management and private donations.

Norman LeBlanc

Mr. Norman E. LeBlanc has over 30 years experience in the field of water quality management with respect to POTW discharges to estuarine and near shore coastal waters. . He did his undergraduate studies in physical oceanography at New York University and his graduate studies in physical oceanography at Old Dominion University. As Chief of Technical Services for the Hampton Roads Sanitation District, Virginia Beach, Virginia his major responsibilities include NPDES, biosolids and air permitting activities for nine major and four minor POTWs. He has been an active participant in the Chesapeake Bay Program in the development and implementation of water quality criteria for the control of nutrient and suspended solids impacts on living resources of the Bay. He has been active in the Association of Metropolitan Sewerage Agencies for as long as he remembers and serves as Chair of the Water Quality Committee. He is also a member of the Research Council for the Water Environment Research Foundation

John McManus

Dr. McManus is the Professor of Marine Biology and Fisheries, University of Miami; Director, National Center for Caribbean Coral Reef Research (NCORE).(1974) B.S. University of Connecticut, Storrs (1978) M.S. University of Connecticut, Storrs (1985) Ph.D. University of Rhode Island, Narragansett. Dr. McManus has a strong interest in the problem of identifying effective indices and indicators of sustainability in ecosystems and coupled human-environment systems. He has served on several international teams to develop these, and is working on models that will assist in the process of developing these measures. He leads NCORE's (National Center for Carribbean Coral Reef Research) efforts to develop programs such as the CARRUS Alliance (Comparative Analysis of Reef Resilience Under Stress), a global program of long-term, interdisciplinary research on coral reef systems focused on the development of Dynamic Decision Support Systems to guide improved reef management. This includes the development of interdisciplinary (social, economic, biological and physical) multi-level agent-based scenario-testing models of coral reefs and adjacent human societies, in which he is directly involved. He has worked on benthos, fish and fisheries from the multivariate, ecological community perspective, and is developing ways to analyze

ecological change in terms of dynamics in species hyperspace. In about 20 years working in Southeast Asia, he was involved in coastal management and research at the biophysical-socioeconomic interface. Within the last ten years, I have received funding support for research from: MacArthur Foundation, European Commission, Netherlands Government, DANIDA (Danish Government),World Bank, Asian Development Bank, UN Food and Agricultural Organization, United Nations Foundation, Living Oceans Foundation, Global Environment Facility, Silicon Graphics Inc., Caribbean Marine Research Center, WorldFish (formerly ICLARM),University of Miami, National Science Foundation, National Oceanic and Atmospheric Agency, Environmental Protection Agency (including Congressional allocations)

Judy L.Meyer

Dr. Judith L. Meyer is a Distinguished Research Professor in the Institute of Ecology at the University of Georgia. She holds a B.S. in Zoology from the University of Michigan, a M.S. in Zoology from the University of Hawaii, and a Ph.D. in Ecology from Cornell University. She has been on the faculty at UGA since 1977. She is an aquatic ecologist who has published over 150 scientific papers on her research on rivers and streams. Her research has focused on ecological processes that maintain water quality, on river and stream food webs, and on the impact of watershed disturbance, urban development, and riparian zone management on river and stream ecosystems. Her current research is on urban rivers, impacts of lawn care practices on stream ecosystems, nitrogen cycling in rivers, impacts of excessive sedimentation on aquatic biota, importance of decaying leaves and woody debris in stream ecosystems, and effects of changes in riparian buffer designations for Georgia's trout streams. She served as Principal Investigator for the Coweeta Long-term Ecological Research Site. Recent funding sources are National Science Foundation, Environmental Protection Agency Water and Watersheds Program, U.S. Fish and Wildlife Service, Mott Foundation, The Nature Conservancy, and Georgia Department of Natural Resources.

Roger Minear

Roger A. Minear, Professor Emeritrus of Civil and Environmental Engineering at the University of Illinois received his B.S. (1964) in Chemistry, M.S.E. (1965) in Sanitary Engineering, and Ph.D. (1971) in Civil Engineering (specializing in environmental chemistry) from the University of Washington. He served as an Instructor at Oregon State University, 1966-1967, an Assistant Professor at Illinois Institute of Technology, 1970-1973, joined the University of Tennessee, Knoxville, as an Associate Professor in 1973, became Professor in 1977, and was named the first Armour T. Granger Professor in 1983. Dr. Minear was employed by Radian Corporation as a Senior Scientist from September 1980 to January 1982 (on leave from the University of Tennessee) and spent the summers of 1983 and 1984 with Oak Ridge National Laboratory as a Senior Development Staff Member in the Environmental Sciences Division. On January 1, 1985, he joined the University of Illinois as the Director of the Institute for Environmental Studies and served in that position until July 15, 1995. In 1987, he also assumed the Directorships of the Office of Solid Waste Research, , and the Interdisciplinary Environmental Toxicology Program, relinquished in 1992. He was an invited scholar at Nankai University, Tianjin, People's Republic of China, September 1988 and was made a guest professor in August of 1996. From January through July of 1996, he was a visiting research scholar at Kyoto University in Japan. He has also served as a private consultant over the years in a variety of environmental areas.Dr. Minear's major areas of scientific interest involve the nature, origin, transport and transformation of organic and inorganic compounds in natural and wastewaters; chemistry of aqueous solutions and chemical processes of water and wastewater treatment; trace and environmental analysis. He has generated 161 professional paper presentations, more than 50 invited seminar presentations, 147 published articles, chapters and reports, and 40 graduate theses in the Environmental Science and Engineering field. Dr. Minear has received 56 research grant and contract awards (excluding multi-year renewals) from state, federal, and private organizations totaling >$5,200,000 since 1971, as PI and coPI. Recent agencies: EPA, AWWARF and NSF.

Deborah Neher

Dr. Deborah Neher is an Associate Professor, Dept. of Earth, Ecological and Environmental Sciences, University of Toledo, 5/02-present. EDUCATION Ph.D., Plant Pathology, University of California, Davis, 1990.M.S., Plant Biology, University of Illinois, Urbana-Champaign, 1986.B.S., Environmental Science, Summa cum laude, McPherson College, McPherson, KS, 1984.Area of expertise: Soil Ecology; Nematodes and Microarthropods as Environmental Indicators for Terrestrial and Wetland Soils; Plant-Soil Interactions Related Service: -H. John Heinz III Center for Science, Economics and the Environment-State of the Nation's Ecosystem Report - Farmlands Work Group member (2000-2002)U.S. Environmental Protection Agency-FIFRA Scientific Advisory Panel, Corn Rootworm Plant-incorporated Protectant Non-target Insect Issues - Workshop Series on Bt crop Management and Environmental Effects- Ecological Assessment of Bt crops on non-target invertebrates, 3-4 June 2002-Application of Ordination Tools to Analyze Community Data, 16 November 2002Sources of recent grant and/or contract support: USDA-Biotechnology Risk Assessment Program and Department of Energy-Program for Ecosystems Research

George O'Connor

George A. O'Connor has been Professor of Environmental Soil Chemistry at the Univ. of Florida since 1990. He received a BS.

from the University of Massachusetts, 1966; an MS from Colorado State University, 1968; and a PhD, from Colorado State University, 1970.Prior to to his positon at the Univ. of Florida, he was a professor at New Mexico State University for 21 years. At both institutions, O'Connor focused his research program on waste management, primarily biosolids. His 30+ years of research effort have attempted to improve our understanding of waste constitutent reactions in soils. His expertise has resulted in his being selected to serve on Peer review and Technical Advisory committees for EPA and the FL Department of Environmental Protection. He is also Chair of a major up-coming conference on Sustainable Land Application (www.conference.ifas.ufl.edu/landapp) that will deal with all kinds of wastes. O'Connor is a Fellow in the Soil Science Society of America and the American Society of Agronomy. Recent funding sources include USEPA, WERF, and various State agencies (DEP, WRRC, DACS).

David M. Ozonoff

David Ozonoff is Professor of Public Health and Chair Emeritus, Department of Environmental Health at Boston University School of Public Health. He graduated with a BS in mathematics from the University of Wisconsin in 1962, from Cornell University Medical College with an MD degree in 1967 and from Johns Hopkins School of Hygiene and Public Health with an MPH degree in 1968. He spent one year as a Macy Fellow in the History of Science Department of Harvard University in 1975 and a year as a Mellon Fellow at MIT in 1976. His primary area of research is in environmental epidemiology, where he has conducted extensive community studies of communities exposed to hazardous wastes and water contaminated with chlorinated ethylenes. He also works on new mathematical techniques for analyzing epidemiological data. He has been Director of the Boston University Superfund Basic Research Program for the last eight years. He is past-President of the Massachusetts Public Health Association, a Fellow of the Johns Hopkins Society of Scholars and a Fellow of the Collegium Ramazzinni. Dr. Ozonoff has served on numerous Federal Advisory Committees, including the Advisory Committee for Energy Related Epidemiological Research to the Secretary of HHS, the Disinfection By-Products Negotiated/Microbial Contamination Rulemaking Committee to the EPA, several environmentally-related NRC committees and NIH grant review committees. He is a Member of the Massachusetts Bioterrorism Preparedness and Response Program Advisory Committee, February 2002 - present. He is on the External Advisory Committees of the Harvard Environmental Health Sciences Center, and the Harvard School of Public Health Environmental Statistics Program, as well as advisory committees of the American Water Works Association Research Foundation and advisory committees on environmental matters to state and local governments. His research is funded by NIEHS, CDC, and the International Joint Commission on the Great Lakes.

Frederick Pfaender

Dr. Pfaender's research career has spanned over thirty years and focused primarily on the activities of microorganisms in aquatic, soil, and aquifer environments and how they are influenced by pollutants. He is a highly respected scientist within his profession and on the Chapel Hill campus, where he currently holds a primary appointment in the School of Public Health's Department of Environmental Sciences and Engineering and a joint appointment in the Curriculum in Marine Sciences. Dr. Pfaender is an active member of numerous professional and honorary societies, including the American Society for Microbiology and the Society for Environmental Toxicology and Chemistry. He also has extensive experience serving on and chairing scientific and environmental advisory committees, including numerous EPA Science Advisory Board panels. Dr. Pfaender's current research examines the regulation mechanisms by which biomaterials are absorbed and made available in soil. His work is currently funded by the National Institute of Environmental Health Sciences. Past funding sources have included the U.S. Department of Energy, and Dow Chemical. Dr. Pfaender received his Ph.D. in Microbiology from Cornell University in 1971.

Timothy Phillips

Dr. Timothy D. Phillips is Director of the Center for Food Safety and Chair of the Intercollegiate Faculty of Toxicology at Texas A&M University. He also holds the appointment of Professor in the College of Veterinary Medicine, the Faculty of Toxicology and the Faculty of Food Science and Technology at Texas A&M University. He obtained the B.S. degree at Mississippi State University and was the recipient of a National Defense and Education Act fellowship to pursue the Ph.D. in Chemistry at the University of Southern Mississippi. Following the completion of two postdoctoral fellow-ships, he joined the faculty at Texas A&M University in 1979, where he has received extensive extramural funding for research and has published more than 135 papers in leading scientific journals. His area of research interest is Molecular Toxicology with emphasis on food-borne and environmental contaminants. Dr. Phillips currently serves as the Co-Editor of Food Additives & Contaminants, a London-based, Taylor & Francis Journal. He is also a member of the Committee on Science and Emerging Issues for the Institute of Food Technologists (IFT) and a member of the Technical Committee for the U.S. Agency for International Development (Peanut CRSP). He is a recipient of various awards, including: 1) the Texas Veterinary Medical Association Award for Research; 2) the Texas A&M System Award for Research; 3) the Texas A&M University Distinguished Achievement Award for Research; 4) the Smith-Kline Beecham Award for Distinguished Research in Animal Health; 5) the Engelhard Chemistry Award for the discovery of NovaSil; 6) the Pfizer Award for Excellence in Research, 7) a Faculty Fellows distinction from the Texas Agricultural Experiment Station, TAMU, 8) the BIFAD Chair's Award for Scientific Excellence, and 9) the

Sigma Xi Distinguished Scientist Award at Texas A&M University. Currently his work is supported by grants from NIEHS, USAID, and Engelhard Chemical Corporation. Funds from these various sources support four graduate students, one postdoctoral research associate and two undergraduate student assistants in Dr. Phillips' laboratory.

Charles A. Pittinger

Dr. Charles A. Pittinger is a Principal of The Cadmus Group, Inc., and director of Cadmus' Cincinnati Office. He earned his Ph.D. in Zoology, with an emphasis in environmental toxicology, in 1984 from the Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia. He has a M.S. in Ecology from The University of Tennessee, Knoxville, Tennessee, awarded in 1978. His B.S. in Biology was conferred in 1975 from The University of Notre Dame, Notre Dame, Indiana. He is known for his research, policy development and leadership in the environmental sciences, particularly ecotoxicology, risk assessment and management. He has served in numerous leadership roles to develop sound and effective science and regulatory policies, guidelines and criteria. He chaired the American Industrial Health Council's Ecological Risk Assessment Committee for five years. He served on the OECD's Risk Assessment Advisory Board, the American Chemistry Council's Ecological Risk Assessment Steering Team and Life-Cycle Analysis Committees; and ASTM Subcommittee E-47. He initiated SETAC's Peer Review Subcommittee and Technical Issue Paper on "Sound Science". In 1993-1994, Dr. Pittinger worked on Capitol Hill with the U.S. House of Representatives Science Committee, as the first Congressional Science Fellow of the Society of Environmental Toxicology and Chemistry (SETAC). He was awarded SETAC's Exceptional Service Award in November 2000, and is co-author of books on Environmental Risk Management and Ecological Assessment.. He currently is serving his second term on the U.S. EPA's Science Advisory Board, Ecological Processes and Effects Committee (EPEC). Dr. Pittinger's has experience with environmental indicators used in both the public and private sector. He was involved with the Heinz Center development of "State of the Nation's Ecosystems Report". As an EPEC member, he co-authored the SAB's "Framework for Assessing and Reporting on Ecological Condition". He actively follows the development and application of environmental indicators in condition reporting. His recent contract support have come from several EPA Offices (Water, OPPTS, ORD) and private businesses.

Susan Powers

Susan E. Powers is a Professor in the Department of Civil and Environmental Engineering and Director of the Center for the Environment at Clarkson University. Dr. Powers' research has focused on understanding the physical and chemical phenomena associated with contaminant transport in subsurface systems, with specific emphasis on organic non-aqueous phase liquids (NAPLs) in complex systems. Her research on NAPL dissolution, the wettability of NAPL-water-mineral systems and the fate of ethanol-blended gasoline in the subsurface is widely cited and considered at the leading edge in her field. Experimental and mathematical modeling techniques are utilized in all research activities. Research that has provided a solid understanding of the environmental fate of oxygenated gasoline has lead to an interest in the application of this science to aid in regulatory and policy decisions. Current projects in this area include life cycle management issues for gasoline, other transportation fuels and energy systems in general. Funding for her research projects has been received from the EPA STAR program, NSF, DOE and the State of California through LLNL.Dr. Powers has been an invited participant at many workshops and symposia related to the environmental impacts of reformulated gasoline. She has served on the Board of the Association of Environmental Engineering and Science Professors and the editorial boards for the Journal of Environmental Engineering, Advances in Water Resources and the Journal of Contaminant Hydrology.

Bradley Sample

Dr. Sample is an ecotoxicologist with over 10 years of experience as an ecological risk assessor and wildlife ecologist focusing on large, complex sites. As a Principal Technologist, he leads risk assessment projects for both state and federal government and industry and serves as CH2M HILL's Southwest Regional ecological risk assessment leader. Dr. Sample has assisted clients with Federal and State agency liaison and guidance documents, risk management, ecological risk assessment strategy, and risk management planning. He specializes in wildlife toxicology of organic and inorganic contaminants, contaminant bioaccumulation, foodweb and ecological modeling, probabilitistic risk assessment, data analyses, and biota sampling, applied statistics, and experimental design. He has extensive experience in evaluation of ecological risks from metals, chlorinated organics, and petroleum compounds. His background covers entomology, ornithology, and mammalogy, in addition to statistics and experimental design. He serves on the steering committee and developed the wildlife exposure model for the EPA's Ecological Soil Screening Levels (EcoSSLs). He is currently developing the wildlife modeling component and over-seeing software development for the Army Risk Assessment Modeling System (ARAMS). He has conducted risk assessments in support of CERCLA and RCRA, and worked on projects for the numerous federal clients (US Army, Navy, Air Force, Coast Guard, US EPA, and US DOE) and private clients (Unocal and Chevron). Dr. Sample is a co-author of a book on ecological risk assessment at contaminated sites, and currently serves on the editorial board of the journal Environmental Toxicology and Chemistry. Elected to the Board of Directors of the Northern California Chapter of the Society for Environmental Toxicology and Chemistry in 2001, he currently serves as the chapter Vice-President. Due to Dr. Sample's expertise, he has twice been invited to serve on peer-review committees for the ecological risk assessment and

bioaccumulation modeling components of the U.S. EPA's Hazardous Waste Rule.

Kathyrn Saterson

Kathryn Saterson is currently the Executive Director of the Center for Environmental Solutions at Duke University. She also has an appointment as a Research Scientist in the Division of Environmental Sciences and Policy at the Nicholas School of the Environment and Earth Sciences at Duke. She received her Ph.D. in biology, and MS in botany from the University of North Carolina at Chapel Hill. Saterson received her BA, with a major in biology and environmental studies from Williams College in Williamstown, MA. From 1999-2001 she was the Director of the Environmental Management Center at the Brandywine Conservancy working on local land conservation in Pennsylvania and northern Delaware. From 1991-1999 Saterson was the Executive Director of the Biodiversity Support Program (BSP), a consortium of World Wildlife Fund, The Nature Conservancy, and the World Resources Institute. Saterson's other professional experience includes five years as a natural resource officer with the US Agency for International Development (USAID), including two years based in Thailand. She was a Congressional Science Fellow with the US House of Representatives Subcommittee on Public Lands, and a AAAS Science and Diplomacy Fellow with USAID. Saterson was elected Secretary to the Board of Governors for the Society for Conservation Biology for 2002 - 2005. She will serve as an environmental juror for the Heinz Awards in 2003. In 2001 she served on the external review team for the US EPA Regional Vulnerability Assessment Program in Research Triangle Park, NC. She has also served on advisory committees for the Ecological Society of America, the Organization for Tropical Studies, the American Institute of Biological Sciences, and the Pew Scholars Program. She has reviewed manuscripts for Environmental Management, Conservation Biology and Science magazine. Saterson's research interests include the role and impacts of private, government and non-government efforts to conserve biological diversity from local to international scales. Recent Research Grants Received1991-1999 US Agency for International Development, to World Wildlife Fund for Biodiversity Support Program

Peter Scheff

Dr. Scheff is a Professor, Environmental and Occupational Health Sciences, University of Illinois at Chicago b. EDUCATION: Ph.D. University of IL at Chicago, School of Public Health, 1979-1983; Environ. and Occup. Hlth Sciences, 1983.M.S. University of IL at the Medical Center, School of Public Health, Environmental Health Sciences, 1977.B.A Grinnell College, Grinnell, Iowa, Music, 1973.c. Areas of expertise: Air quality management, industrial hygiene, environmental modeling, health effects of environmental pollutants.d. Service: Board of Directors of the Lake Michigan Section of the Air and Waste Management Association e. Recent grant activity.Bringing continuous PM2.5 to the public in near real-time. $52,000, P.I., Illinois Environmental Protection Agency, September, 2002 - March, 2004.Graduate Training in Air Pollution. $259,103, P.I. U.S. Environmental Protection Agency grant T82832601, Air Pollution Training Institute, August, 2002 - July, 2007.U.S. Environmental Protection Agency. $97,009. Intergovernmental Personnel Act Mobility Program, October, 2001 to September, 2003.Graduate Training in Air Pollution. $155,457, P.I. U.S. Environmental Protection Agency grant T82832601, Air Pollution Training Institute, September, 2000 - August, 2003.Mold and Moisture in Inner City Housing. $161,095, P.I., Illinois Department of Public Health, June 1, 2000 to April 30, 2003.

Richard Schlesinger

Dr. Schelsinger is Prof. & Chair, Dep't Biol. Sci., Pace U., b)BA(Biol.) Queens Coll., MS & PhD(Biol.) NYU., c) Env. Health Sci., Toxicol. & Physiol.. d)Major Society and Committee Memberships Panel on Pulmonary Toxicology, NRC-NAS, 1986-1989Respiratory Tract Particle Dosimetry Modeling Task Group, NCRP, 1984-1997Emergency Response Planning Guidelines Committee, AIHA, 1988-pres.Committee on Research Priorities for Airborne Particulate Matter, NRC-NAS, 1998-presSubcommitte on Acute Exposure Guidelines, NRC-NAS, 1998-presMember, Society of Toxicology (President, Inhalation Specialty Section 1991-1992)Other: SAB, WHO, NIEHS Over the years Dr. Schlesinger has received funding from the following sources: Electric Power Research Institute, Health Effects Institute, USEPA, NIEHS, NIOSH.

Oswald Schmitz

Dr. Schmitz is Professor, School of Forestry and Environmental Studies, Yale UniversityEDUCATION:1985-1989 University of Michigan, School of Natural Resources, Ph.D.1983-1984 University of Guelph, Department of Zoology, M.Sc.1978-1982 University of Guelph, Department of Zoology, B.Sc. EXPERTISE: Ecology; Natural Resources Management, Whole Ecosystems Research, and Ecosystems Sustainability PROFESSIONAL AFFILIATIONS Ecological Society of America; Society of American Naturalists; American Associate for the Advancement of Science; Sigma Xi, The Scientific Research Society PROFESSIONAL SERVICE2002 External Faculty Opponent, Ph.D. Dissertation, University of Amsterdam2002 Organized a Special Feature entitled "Linking individual behavior to community dynamics" to be published in Ecology.2001- Member, Yale University Press Publications Committee2002 Review Panel Member, National Science Foundation (NSF) Biocomplexity in the Environment Program. 2000 Review Panel Member, United States Department of Agriculture (USDA) Ecosystem Science Grants Program2000 Review Panel Member, National Science Foundation (NSF) Doctoral Dissertation Improvement Grants Program 1999 Member, Scientific Advisory Panel on "Total Land Management", Mining Prospectors and Developers Association of

Canada.1996-1997 Guest Editor, Special issue of Evolutionary Ecology (November 1997) on the theme "The population and community dynamical implications of optimal foraging theory" commemorating the 30th anniversary of optimal foraging theory. 1994 - Standing Member, Scientific Advisory Board, Mistik Forest Management Ltd., Saskatchewan, Canada EDITORIAL SERVICE 2002-present Associate Editor, OECOLOGIA (Berlin)1999-present Associate Editor, ECOLOGY & ECOLOGICAL MONOGRAPHS Currently active grant is NSF DEB-0107780 "Perturbation and recovery of an old-field ecosystem".

Mark Schwartz

Professor, Department of Environmental Science and Policy, College of Agriculture, University of California. B.A. Biology and Chemistry from College of St. Thomas (St. Paul, MN); Master of Science in Ecology from the University of Minnesota; Phd in Biology from Florida State University. My current research is focused on five areas: (1) the potential impact of global warming on the distribution of trees in the eastern US; (2) Taxonomic and geographic patterns in the distribution of rare plants and how this affects conservation strategies; (3) economic models of mutualism; (4) the interactions among fire, native herbivores and cattle on Miombo vegetation at the landscape scale; and (5) planning and implementing effective floodplain restoration in the Cosumnes River ecosystem.I spent the 2001-2002 academic year as a program manager at the National Science Foundation (Ecosystems program and Biocomplexity in the Environment). I have been the American editor of Biological Conservation for the past 5 years. I am on the editorial board of Ecology letters. I am a member of the Society for Conservation Biology and the Ecological Society of America. Recent grant support comes from CalFed and from the National Science Foundation

Bradley Smith

Bradley F. Smith was named Dean of Huxley College of Environmental Studies at Western Washington University in September 1994. Dr. Smith holds a B.A. and M.A. in political science and a Ph.D. from the University of Michigan's School of Natural Resources and Environment. Prior to his appointment as Dean, Dr. Smith had served for 3 years as the first Director of the Office of Environmental Education for theU.S. Environmental Protection Agency and as a Special Assistant to the administrator of the EPA. He also served as an acting Associate Administrator of the EPA and Acting President of the National Environmental Education and Training foundation. From 1975 to 1990, Dr. Smith was a professor of political science and biology, and concurrently was executive director of Michigan's Tobico Marsh National Refuge from 1982 to 1990. During this time, he also served as adjunct faculty at the Air Force Institute of Technology and the University of Michigan's School of Natural Resources and Environment. Dr. Smith has considerable international experience. He was a Fulbright Scholar to Great Britain and worked as a research fellow for Environment Canada and the Canadian Fish and Wildlife Service. He is a frequent speaker on environmental issues worldwide and erves on the International Scholars Program for the U.S. Information Agency. He also served as a U.S. representative on the Tri-Lateral Commission on environmental education with Canada and Mexico. In 1996 he was awarded a NATO Environmental Fellowship. Currently, Dr. Smith serves on numerous boards and commissions including the Global Rivers Environmental Education Network (GREEN), The Annapolis Center for Environmental Quality and the President's Council for Sustainable Development (Education Task Force). He has written extensively on environmental issues and policy. His most recent publications include co-author of Environmental Science: A Study of Interrelationships, seventh edition 2000, and Environmental Science Field Guide and Laboratory Manual, seventh edition 2000.

Jeffrey Steinfeld

JEFFREY I. STEINFELD Address: Room 2-221, Department of Chemistry Phone (617) 253-4525 Massachusetts Institute of Technology Fax (617) 253-7030Cambridge, Massachusetts 02139 e-mail: jisteinf@mit.edu Personal: Born July 2, 1940, Brooklyn, New York Education: B.S. M.I.T., 1962; Ph.D. Harvard University, 1965Professional Experience Postdoctoral Fellow, University of Sheffield (England) 1965-1966Assistant Professor of Chemistry, M.I.T., 1966-1970; Associate Professor of Chemistry, M.I.T., 1970-1979Professor of Chemistry, M.I.T., 1980Visiting Professor, U. of Southern California 1981Visiting Professor, Joint Institute of Laboratory Astrophysics 1983Professeur Invité, U. of Bourgogne, Dijon, France1991Adjunct Professor, University of Science and Technology of China 1996 –Professional Activities & Honors NSF Predoctoral Fellowship 1962-1965NSF Postdoctoral Fellowship 1965-1966Alfred P. Sloan Research Fellowship 1969-1971J.S. Guggenheim Memorial Fellowship 1972-1973Co-chairman, Gordon Conference on Molecular Energy Transfer 1969Co-chairman, NSF Workshop, "The Laser Revolution in Energy Related Chemistry" 1976Editor, Spectrochimica Acta, Part A1983-1998Co-chairman, "Symposium on Future Trends in Spectroscopy" (Vatican City) 1989International Advisory Board, Progress in Natural Science (China) 1993 American Chemical Society Committee on Environmental Improvement; 1996 ;Chair 1999-2002 M.I.T. Program in Environmental Education & Research, 1993 ; Co-Director, 1997 M.I.T. Council on the Environment 1996 NRC Committee on Review & Evaluation of Army Chemical Stockpile 1999-2002Disposal Program A.C.S. Director's Award for advancing public policy in environment 1999H.W. Thompson Award 1999Professional Societies American Physical Society (Fellow); American Chemical Society; AAAS; Phi Lambda Upsilon; Sigma Xi; Federation of American Scientists; Union of Concerned ScientistsPublications:183 refereed journal publications and review articles (complete list available)3 textbooks and 4 edited

volumes Graduate Students: 47 total; in past 5 years, J. Janni, I. Dubinsky, J. Taylor, S. Witonsky, B. Gibbs, P. Sheehy Postdoctoral Scholars: 25 total; in past 5 years, M. Gardner, M. Canagaratna, S.F. Yang, M. Hunter Collaborating Scientists during past 48 months Prof. R.W. Field, Dept. of Chemistry, MIT (co-P.I., FAA grant)Prof. J.S. Francisco, Dept. of Chemistry, Purdue University (co-author, textbook)Dr. A. Kachanov, Picarro Inc., Sunnyvale, Calif. (ICLAS & CRDS collab.)Dr. Charles E. Kolb, Aerodyne Research Inc. (NSF Workshop IES-2000)Prof. S.F.A. Kettle, University of East Anglia (Norwich, U.K.) (journal editing) Prof. M. Molina, Dept. of EAPS, MIT (Dreyfus Fellowships) Dr. T. Owano, Los Gatos Research, Mountain View, Calif. (subcontractor)Prof. Martin Quack, Lab. für physikalische Chemie, ETH, Zürich (co-P.I., AGS project)Prof. Jefferson Tester, Energy Laboratory, M.I.T. (co-P.I., EPA/NSF grant)Dr. J. Wormhoudt, Aerodyne Corp., Billerica, Mass. (co-author; also TSA grant)Prof. Qingshi Zhu, President, University of Science & Technology (visiting committee)of China Graduate and Postdoctoral Advisors: Prof. William Klemperer (retired from Harvard University, May 2002) Prof. Lord George Porter (deceased August 31, 2002)Current research sponsors include the NASA Upper Atmosphere Research Program, Alliance for Global Sustainability, Eastern Iowa Community College Dist. (Subward from NSF-DUE) and NSF-0328221.

Alan Steinman

Alan Steinman is currently Director of the Annis Water Resources Institute at Grand Valley State University. He oversees the research, educational activities, and outreach at the Institute. Prior to joining AWRI, Steinman was the Director of the Okeechobee Restoration Program at the South Florida Water Management District, where he oversaw a 50-person, $20 million cradle-to-grave restoration program of Lake Okeechobee, its watershed, and the connecting estuaries. This included elements of research, planning, engineering, real estate acquisition, regulation, and outreach. Steinman received his PhD in Botany and Aquatic Ecology at Oregon State University and did his postdoc at Oak Ridge National Laboratory in nutrient cycling and disturbance ecology. Steinman's expertise includes restoration ecology, nutrient cycling, periphyton ecology, and aquatic metabolism. His current research projects include watershed assessment of an economically disadvantaged region, internal nutrient cycling, and developing restoration targets for an Area of Concern in the Great Lakes. He is currently the associate editor of two scientific journals, recently served on the Advisory Board for USGS's contaminants program and MN Sea Grant, and was a member of EPA's nutrient criteria for streams and rivers. Locally, he serves on the Green Infrastructure Task Force for the West Michigan Strategic Alliance and is a member of the Sustainable Water Resources Roundtable. Recent Grant sources: Enhancing the Muskegon River Initiative: fish recruitment at the interface of the Great Lakes and their watersheds. Co-PI. 2004-2007. Funded by Great Lake Fishery Trust. $1,600,000.Watershed Assessment of Mona Lake Watershed. Co-PI. 2002-2004. Funded by Mott Foundation. $100,000.Influence of Cattle Grazing and Land Use on Freshwater Wetlands in Rangeland Ecosystems. Co-PI. 2000-20003. Funded by USDA. $277,211.Lake Okeechobee Restoration Project. PI. 2001-2005. State of Florida. $10,000,000. Lake Okeechobee Restoration Project. PI. 2000-2004. Surface Water Advisory Restoration Grants, State of Florida. $38,500,000. Recent Contracts Managed: Phosphorus Research in a Constructed Wetland. U.S. Geological Survey. 1998-2000. $160,000.

Valerie Thomas

Dr. Valerie Thomas is a Research Scientist at the Princeton Environmental institute at Princeton University. Dr. Thomas received her Ph.D. in theoretical physics from Cornell University and was a post-doctoral Research Fellow at the Department of Engineering and Public Policy at Carnegie Mellon University. Her research is in the areas of Industrial Ecology and Environmental Policy. Recent research topics include mercury exposure, dioxin sources, the economic demand impacts of second-hand markets, electronics for product recycling, environmental policy in the former Soviet Union, and ethanol as a gasoline lead replacement in Africa. She is co-author of the book "Industrial Ecology and Global Change," (Cambridge University Press, 1994). She is a Member of the Environmental Engineering Committee of the EPA Science Advisory Board. She was Chair of the Metals Assessment Review (2002), and she participated in the SAB reviews of the Dioxin Reassessment, the Mercury Report to Congress, and the Integrated Risk Project. She is a Fellow of the American Physical Society. She will be vice-chair of the Gordon Conference on Industrial Ecology in 2004 and chair in 2006. She has funding from the US EPA STAR grants program, and from the National Science Foundation.

Stephen Trombulak

Steve Trombulak is currently the Albert D. Mead Professor of Biology and Environmental Studies at Middlebury College in Vermont. His B.A. is in Biology (1977, UCLA) and his Ph.D. is in Zoology/Ecology (1983, UWashington). His area of expertise and research activities include the study of how conservation lands can be integrated into the larger matrix of lands associated with natural resource harvesting and management. He is involved with the Society for Conservation Biology (Board of Governors and the North American Section Board of Governors) and several regional advisory groups, including the Northern Forest Lands Council and the (Vermont) Governor's Forest Resources Advisory Committee. All of his recent contract support has been through The Nature Conservancy and the Vermont Natural Resources Council.

Cynthia Warrick

Dr. Cynthia Warrick is Assistant Professor of Management & Policy Sciences at the University of Texas Houston School of

Public Health. Dr. Warrick has been working with poor and minority communities to address the social and environmental determinants of health effects. She has worked nationwide to assist communities with Brownfields redevelopment activities, Federal Facilities redevelopment activities and hazardous site cleanup. Dr. Warrick works with Mayors of small municipalities to develop programs to address brownfields, underground storage tanks, and Superfund sites. She served as an Environmental Justice representative on the FACA Committees on Iron & Steel, Printing, and Metal Finishing, of EPA's Common Sense Initiative. Dr. Warrick was instrumental in assisting with building partnerships and liaisons with industry, state & local government, and environmentalists on these subcommittees. Her current funding is in cancer prevention from the NIH and DOD. She is a member of the National Medical Association Environmental Health & Bioterrorism Task Force. The attached CV documents Dr. Warrick's expertise in policy development and analysis, program management, and academic research. She is interested in serving on the Environmental Health Committee of the EPA Science Advisory Board.

Judith S. Weis

Dr. Weis is Professor, Department of Biological Sciences, Rutgers University, Newark NJ. Previous positions: She previously served as Associate Dean for Academic Affairs at the University. She also has served as a AAAS/American Society of Zoologists Congressional Science Fellow with the Senate Environment and Public Works Committee, and served as a Program Director at the National Science Foundation. She has been a visiting scientist at EPA, both at the research lab at Gulf Breeze FL and in the Office of Water (Ocean and Coastal Protection Division). b. Editorial experience: She was previously on the Editorial Boards of Transactions of the American Fisheries Society and the Bulletin of Environmental Contamination and Toxicology. She is currently Associate Editor of Bulletin of Environmental Contamination and Toxicology (for the area of Aquatic Toxicology, Metals).c. Research Interests: Her research has focused on estuarine ecology and ecotoxicology. She has published over 150 refereed papers, focusing mainly on stresses in the marine environment, and their effects on organisms, populations and communities. Particular areas of focus have been effects of metal contaminants on growth, development, and behavior; development of tolerance to contaminants in populations living in contaminated areas; effects of invasive marsh plant species on estuarine ecology and on fate of metal contaminants. Much of her research has been focused on estuaries in the NY/NJ Harbor area. d. Leadership positions: She has served on the Boards of Directors of the Society of Environmental Toxicology and Chemistry (SETAC) and the American Institute of Biological Sciences (AIBS). She was the Chair of the Biology Section of American Association for the Advancement of Science (AAAS) in 2000, and was the President of AIBS in 2001. She is a fellow of the American Association for the Advancement of Science (AAAS). She has served on advisory committees for the US Environmental Protection Agency (STAA for the Science Advisory Board, and the Endocrine Disruptors Screening and Testing Advisory Committee – EDSTAC) and National Oceanic and Atmospheric Administration. She has been a member of the Marine Board of the National Research Council, and currently serves on the National Sea Grant Review Panel. e. Advanced Degrees: She received her bachelor's degree from Cornell University, and MS and PhD from New York University.f. Sources of recent grant support: US Geological Survey - Water Resources research program; National Science Foundation - Division of Environmental Biology; and Meadowlands Environmental Research Institute. Also received support for research projects in Indonesia from Operation Wallacea.

Barry Wilson

Barry Wilson received his BA dewgree at the University of Chicago, aBS and MS in Biology at the Illinois Institute of Technology and a Ph.D. in Zoology from UCLA in 1962. He has been a member of the College of Agriculture at UC davis since then, currently at the level of Professor, Step IX. His areas of expertise include neurotoxicology and ecotoxicology. Current research focuses on organophosphate induced neuropathis including Gulf War syndrome, standardization of clinical cholinesterase testing, impact of pesticides on the environment, impact of pesticides on development of cells, birds, fish and mammals. Wilson serves on several California EPA pesticide advisory committees,has just finished a term on the UCD Graduate Council. He is an active member of the Society of Toxicology (SOT) and the Society for Environmental Toxicology and Chemistry (SETAC), both locally and nationally. He is a member of the NIEHS supported UCD Center for Environmental Health Sciences and the NIOSH UCD Center for Agricultural Health and Safety. Additional grant support is from DOD and several California commodity groups.

Judy Zelikoff

Dr. Zelikoff has served from 1982-Present at theNEW YORK UNIVERSITY SCHOOL OF MEDICINE, Institute of Environmental Medicine, Tuxedo, NY - Tenured-Associate Professor Pulmonary Immunotoxicology:Characterization of inhaled metal, gaseous, and airborne pollutant mixtures on pulmonary immune defense mechanisms and host resistance against infectious disease. Environmental toxicology/ Ecoimmunotoxicology: Effects of aquatic pollutants on the immune responses of fish; development of immune biomarkers. Alternative animal models for immunotoxicological studies. Developmental Immunotoxicology: Effects of prenatal chemical exposures on immune defense mechanisms of the neonate.EDUCATION1973: Bachelor of Science (Biology)Upsala College, East Orange, NJ1976: Master of Science (Microbiology), Fairleigh Dickinson University in conjunction with UMDNJ-New Jersey Medical School Department of

Neuroscience Newark, NJ1982: Doctor of Philosophy (Experimental Pathology) UMDNJ-New Jersey Medical School Department of Pathology Newark, NJ Service: Society of Toxicology; Subcommittee for Minority Initiatives; Society of Environmental Toxicology and Chemistry; National Academy of Science, Institute of Medicine, Gulf War Health Effects; National Academy of Science, National Research Council, Committee on Spacecraft Water Exposure Guidelines, Grant Support: Philip Morris Foundation; Dept. of Defense; NIH; NIOSH; EPA